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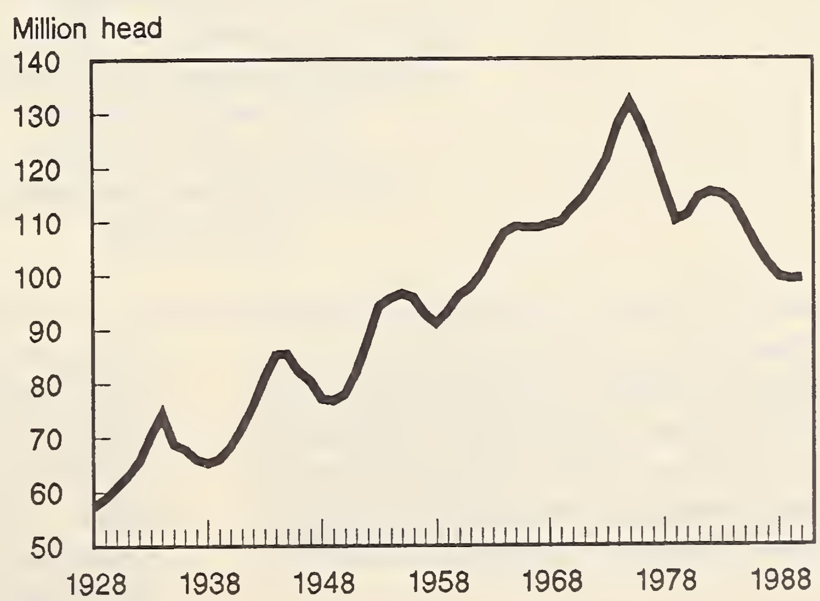
Livestock and Poultry

Situation and Outlook Report

U.S. Cattle Inventory



Livestock and Poultry Situation and Outlook. Commodity Economics Division, Economic Research Service, U.S. Department of Agriculture, February 1990, LPS-40.

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The present forecasts will be updated, if needed, in the World Agricultural Supply and Demand Estimates scheduled for release on March 9, April 10, and May 10, 1990.

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As of January 1, 1990, the U.S. cattle and calf inventory had increased only marginally from a year ago. Beef cow herd expansion has started in response to positive returns above cash costs to cow-calf producers. However, this incentive has been partly offset by widespread drought in recent years. Beef cow numbers were up 1 percent from a year ago and 2 percent from January 1, 1988. However, the number of heifers being held for possible addition to the beef cow herd remained unchanged from a year ago.

The number of cattle on feed at the beginning of this year was up 3 percent from a year ago. A 6-percent increase in yearlings outside feedlots on January 1 should support relatively large placements on feed in first-half 1990 and consequently larger fed cattle marketings throughout the year. Beef production will likely rise about 2 percent due to these increased marketings and heavier carcass weights. Nonfed slaughter will remain low, and fed slaughter will account for about 78 percent of the total. Per capita beef consumption will likely decline slightly as population expands and increases in net beef trade (lower imports, increased exports) more than offset higher production. Consequently, Choice fed steer prices at Omaha may average about $1 above last year's $72.50 per cwt. Retail prices for Choice beef may be up 1-3 percent.

Hog prices may average around $50 per cwt in 1990, supported by reduced pork supplies. Retail pork prices have risen in recent months, reflecting higher hog prices and wider farm-to-retail spreads. Retail pork prices for the year may increase 6-8 percent from last year.

Favorable returns to broiler producers are encouraging continued production expansion. Broiler production is expected to increase about 7 percent from a year ago. Wholesale prices will likely average in the upper 40- to mid-50-cent-per-pound range, down from 1989's 59 cents. Retail broiler prices may decline 9-11 percent.

Continued lackluster returns for turkey producers may discourage growers from following their earlier intentions to raise 9 percent more turkeys in 1990; turkey production may rise 5-6 percent. Wholesale hen prices are expected to average in the high 50- to low 60-cent-per-pound range, compared with 67 cents in 1989. Retail turkey prices could drop 5-7 percent.

Total egg production is expected to increase about 2 percent in 1990, reversing 1989's 3-percent decline. The gain reflects flock expansion as producers respond to last year's favorable returns. Retail egg prices may decline 11-13 percent.

Table 1--Livestock, poultry, and egg production and prices (All percent changes shown are from a year earlier.)

Item	1988	1989					1990 1/				
	Annual	I	II	III	IV	Annual	I	II	III	IV	Annual
						Million pounds					
Production:											
Beef	23,424	5,529	5,777	5,892	5,775	22,973	5,625	6,025	6,050	5,675	23,375
% change	0	-3	0	-5	0	-2	2	4	3	-2	2
Pork	15,623	3,887	3,928	3,789	4,155	15,759	3,875	3,650	3,700	4,300	15,525
% change	9	3	5	0	-4	1	0	-7	-2	3	-1
Lamb & mutton	329	87	80	82	92	341	95	82	85	93	355
% change	6	2	0	2	10	4	9	2	4	1	4
Veal	387	91	85	84	84	344	85	85	85	85	340
% change	-7	-6	-8	-15	-15	-11	-7	0	1	1	-1
Total red meat	39,763	9,594	9,870	9,847	10,106	39,417	9,680	9,842	9,920	10,153	39,595
% change	3	-1	2	-3	-2	-1	1	0	1	0	0
Broilers 2/	16,124	4,129	4,389	4,395	4,420	17,334	4,470	4,700	4,715	4,600	18,485
% change	4	3	8	9	10	8	8	7	7	4	7
Turkeys 2/	3,923	804	1,014	1,176	1,179	4,174	950	1,100	1,180	1,170	4,400
% change	6	-4	3	10	13	6	18	8	0	-1	5
Total poultry 3/	20,587	5,070	5,539	5,704	5,725	22,037	5,555	5,940	6,020	5,905	23,420
% change	4	2	6	9	11	7	10	7	6	3	6
Total red meat and poultry	60,350	14,664	15,409	15,551	15,831	61,454	15,235	15,782	15,940	16,058	63,015
% change	4	0	3	1	2	2	4	2	3	1	3
						Million dozen					
Eggs	5,784	1,389	1,394	1,389	1,414	5,586	1,400	1,410	1,420	1,470	5,700
% change	-1	-6	-3	-2	-2	-3	1	1	2	4	2
Prices						Dollars per cwt					
Choice steers, Omaha 1000-1100 lb.	69.54	73.67	73.85	70.09	72.46	72.52	74-78	70-76	68-74	71-77	71-77
Barrows and gilts, 7-markets	43.39	40.78	41.84	46.07	47.42	44.03	46-50	50-56	49-55	43-49	47-53
Slaughter lambs, Ch., San Angel	68.26	69.29	74.79	66.29	58.90	67.32	60-64	69-75	60-66	58-64	62-68
						Cents per pound					
Broilers, 12-city avg. 4/	56.3	59.4	67.1	59.7	49.8	59.0	49-53	50-56	52-58	46-52	49-55
Turkeys, Eastern region 5/	61.5	62.4	71.1	62.3	71.0	66.7	51-55	53-59	59-65	62-68	56-62
						Cents per dozen					
Eggs New York 6/	62.1	78.4	75.2	81.5	92.6	81.9	83-87	74-80	62-68	59-65	69-75

1/ Projected. 2/ Federally inspecte. 3/ Includes broilers, turkeys, and mature chickens. 4/ Wholesale weighted average. 5/ Wholesale, 8- to 16-pound young hens. 6/ Cartoned, consumer Grade A large, sales to volume buyers.

Factors Affecting Livestock and Meat

Unusual events—extreme cold in December and crude oil price increases—have done little to change the overall macroeconomic outlook for continued modest growth, slow industrial activity, a moderate underlying inflation rate, and slowly falling interest rates. However, recent events in Eastern Europe have heightened awareness that the United States forms part of the global economy, with a large budget deficit and monetary affairs intertwined with those of other nations. This global interaction will continue to impact the domestic as well as agricultural and livestock economies trade.

Export prospects in the feed grain sector continue to strengthen and until spring planting is completed, exports will likely remain the driver of domestic grain prices. The USDA February corn export estimate for 1989/90 was increased 125 million bushels to 2,275 million. Consequently, this year's ending stock estimate has been reduced to 1,480 million bushels, down substantially from 1,930 last year and 4,259 in 1987/88. The average farm price of corn for this year is estimated at $2.20 to $2.40 per bushel, down from $2.54 last year, but 13 to 24 percent above 1987/88. The first view of the feed grain and oilseed crops to be harvested this year will be presented in the *Prospective Plantings*, scheduled to be released on March 30.

The forecast of soybean crushings for 1989/90 were revised downward by 150,000 short tons to 26.077 million due to lagging meal exports. Soybean meal prices are expected to average $160 to $180 a ton, down from $233 a year ago, and $222 two years ago.

Table 2--Hay acreage, production, and stocks

Item	1987	1988	1989	1989 / 1988
		1,000 acres		Percent
Acreage harvested	60,133	65,055	63,395	97
		1,000 tons		
Production	147,457	126,010	145,445	115
Stocks on farms				
May 1	32,333	27,074	17,507	65
December 1	117,882	90,312	101,158	112
Production + May 1 stocks	179,875	153,084	162,952	106

Forage Supplies Aided by Mild Weather In Early 1990

Final estimates of hay acreages, production, and stocks have been released by the National Agricultural Statistics Service (NASS) for 1982-87 following release of the 1987 Census of Agriculture. Estimates for 1988 and 1989 were revised in the 1989 Crop Production Summary released in January. Acreage and production estimates for 1987 and 1988 were revised downward, while those for 1989 were increased. Although hay acreage harvested in 1989 was 3 percent below a year earlier, production rose 15 percent from the drought-reduced 1988 harvest, and was only 1 percent below the 1987 harvest.

Dry conditions in many areas resulted in continued heavy roughage use in 1989. Nevertheless, higher production boosted December 1 hay stocks 12 percent from a year earlier. Dry conditions in parts of the southern and central Great Plains last fall through mid-winter and extremely low temperatures in December undoubtedly prompted increased feeding and a sharp drawdown in hay stocks after December 1. However, the cold extremes of late fall-early winter were followed by warm weather in January and February. Warmer than normal temperatures, together with improved moisture conditions in many areas, likely improved forage availability in Southern grazing areas, while reducing supplemental feeding in most areas. The farm price of hay rose less than $1 a ton from December to January, and averaged $4.50 below a year earlier.

Additional moisture is still needed in many areas to improve 1990 crop and forage prospects. Improved pasture and range conditions this spring and the likelihood of some rebuilding of grain stocks remain the keys to an accelerated pace of beef herd expansion in many areas.

Livestock and Red Meats

Cattle

Cattle Slaughter and Beef Production To Expand In 1990

Commercial cattle slaughter in 1990 is expected to increase to around 34.4 million head, up about 1 percent from last year. Fed cattle slaughter is expected to increase nearly 3 percent, representing over 78 percent of the cattle slaughter. Average commercial carcass weights are expected to in-

Table 3--Commercial cattle slaughter 1/ and production

Year	Steers and heifers			Cows	Bulls and stags	Total	Dressed weight	Commercial production
	Fed	Nonfed	Total					
	1,000 head						Pounds	Million pounds
1984								
I	6,467	458	6,925	2,081	164	9,169	623	5,710
II	6,476	660	7,136	1,998	209	9,343	623	5,820
III	6,556	620	7,176	2,169	218	9,563	622	5,952
IV	6,259	678	6,937	2,374	196	9,507	624	5,936
Year	25,758	2,416	28,174	8,622	787	37,582	623	23,418
1985								
I	6,678	209	6,887	1,879	170	8,936	637	5,692
II	6,663	540	7,203	1,629	195	9,027	656	5,923
III	6,863	604	7,467	1,692	195	9,353	659	6,167
IV	5,977	611	6,588	2,190	199	8,977	643	5,775
Year	26,181	1,964	28,145	7,390	759	36,293	649	23,557
1986								
I	6,507	327	6,834	1,885	165	8,884	649	5,769
II	6,700	685	7,385	2,006	181	9,572	653	6,246
III	6,836	684	7,520	1,941	191	9,652	651	6,273
IV	6,192	682	6,874	2,129	177	9,180	645	5,925
Year	26,235	2,378	28,613	7,961	714	37,288	649	24,213
1987								
I	6,507	443	6,950	1,652	163	8,765	656	5,754
II	6,510	586	7,096	1,603	179	8,878	646	5,737
III	7,011	395	7,406	1,636	181	9,223	657	6,064
IV	6,401	495	6,896	1,719	166	8,781	666	5,850
Year	26,429	1,919	28,348	6,610	689	35,647	657	23,405
1988								
I	6,621	279	6,900	1,529	152	8,581	664	5,700
II	6,777	314	7,091	1,504	164	8,759	660	5,784
III	7,209	249	7,458	1,575	167	9,200	672	6,185
IV	6,192	457	6,649	1,729	161	8,539	674	5,755
Year	26,799	1,299	28,098	6,337	644	35,079	668	23,424
1989								
I	6,390	97	6,487	1,550	143	8,180	676	5,529
II	6,959	26	6,985	1,541	168	8,694	664	5,777
III	6,785	191	6,976	1,460	176	8,612	684	5,892
IV	6,072	420	6,492	1,766	172	8,430	685	5,775
Year	26,206	734	26,940	6,316	659	33,916	677	22,973

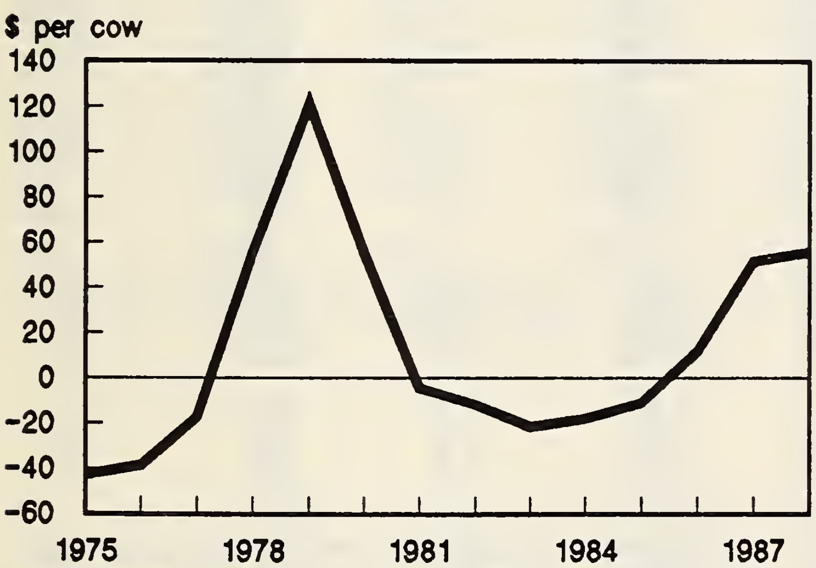
1/ Classes estimated.

Table 4--Heifers entering cow herd January-June and July-December

Year	Jan. 1 cow inventory	Intended herd replacements Jan. 1	Total 1/ disappearance Jan.-June	July 1 cow inventory	Heifers: Entering herd Jan.-June	Heifers: Percent entering	Intended herd replacements July 1	Total 2/ disappearance July-Dec.	Jan. 1 cow inventory following year	Heifers: Entering herd July-Dec.	Heifers: Percent entering
	1,000 head					Percent	1,000 head				Percent
1973	52,553	11,306	3,550	54,037	5,034	44.5	11,144	3,496	54,478	3,937	35.3
1974	54,478	12,134	3,625	56,960	6,107	50.3	11,780	4,702	56,931	4,673	39.7
1975	56,931	12,971	5,212	58,053	6,336	48.8	11,306	7,197	54,971	4,118	36.4
1976	54,971	11,148	5,628	53,938	4,595	41.2	10,475	5,811	52,441	4,314	41.2
1977	52,441	10,414	5,221	52,190	4,970	47.7	9,846	5,429	49,635	2,874	29.2
1978	49,635	9,744	4,961	48,413	3,739	38.4	9,340	4,253	47,852	3,692	39.5
1979	47,852	9,459	3,413	47,815	3,376	35.7	9,885	3,235	47,866	3,286	33.2
1980	47,866	10,101	3,304	49,941	5,379	53.3	10,214	3,748	49,622	3,429	33.6
1981	49,622	10,481	3,599	51,004	4,981	47.5	10,856	3,788	50,216	3,000	27.6
1982	50,216	11,147	3,925	49,990	3,699	33.2	10,900	4,182	48,986	3,178	29.2
1983	48,986	10,881	3,885	49,600	4,499	41.3	10,680	4,447	48,543	3,390	31.7
1984	48,543	10,714	4,563	48,500	4,520	42.2	10,450	4,782	46,182	2,464	23.6
1985	46,182	10,318	3,971	46,300	4,089	39.6	9,900	4,113	44,869	2,682	27.1
1986	44,869	9,874	4,340	45,000	4,471	45.3	9,500	4,294	44,412	3,706	39.0
1987	44,412	9,519	3,699	44,400	3,687	38.7	9,400	3,577	43,494	2,671	28.4
1988	43,494	9,371	3,468	44,300	4,274	45.6	9,200	3,521	43,727	2,948	32.0
1989	43,727	9,682	3,528	44,300	4,101	42.4	9,500	3,374	43,854	2,928	30.8
1990	43,854	9,765									

1/ Death loss calculated as 1 percent of January 1 cow inventory plus estimated commercial cow slaughter. 2/ Death loss calculated as 1/2 percent of January 1 cow inventory plus estimated commercial cow slaughter.

Figure 1
Returns to U.S. Cow-Calf Producers



Receipts less cash expenses.

crease about 3 pounds per head to a new record of 680 pounds. The growing proportion of fed cattle in the slaughter and the trend toward heavier steer, heifer, and bull carcass weights contribute to the heavier average carcass weights. Beef production for 1990 is expected to show nearly a 2-percent year-over-year increase. Spring-quarter beef production may show the greatest year-to-year increase, around 4 percent, with smaller gains during the winter and summer quarters. Fall 1990 beef production could decline by 1-3 percent, depending on the size of the fall cow slaughter.

Cattle Liquidation Phase Likely Ends

The January 1, 1990 U.S. cattle inventory was 99.3 million head, up about 150,000 head from the previous year. This represents the end of the liquidation phase of the last cattle cycle. The beef cow herd has increased for the second consecutive year in spite of drought conditions in some areas in recent years. However, while the expansion phase of a new cycle has likely begun, the expansion for the first year into the phase was the smallest of the past six cycles. (See box for a historical perspective of the past six cattle cycles and expectations for the present cycle.)

Slightly Larger Calf Crop Anticipated in 1990

The January 1, 1990 total cow herd was reported at 43.9 million head, a fraction of a percent above a year ago. The beef cow herd was up 1 percent, while dairy cow numbers were off 1 percent. Beef replacement heifers remained unchanged from last year, and replacement dairy heifers went up 2 percent. The balance sheet for heifers entering the cow herd indicated that 2.9 million replacement heifers calved and entered the cow herd during the second half of 1989. Therefore, 30.8 percent of the July 1989 replacement heifer inventory calved, compared with the preceding 10-year average of 30.5 percent. This year, producers are expected to increase the number of beef heifers retained for breeding.

Annual budget returns calculated for cow-calf producers (receipts less cash expenses) have been positive since 1986. Nevertheless, receipts per cow have been well below the levels of the late 1970's, when returns ranged from $60 to $120 per cow during most of the expansion phase of the last cattle cycle. Lower cow-calf returns during this cycle's expansion phase will likely hold the annual expansion rate for the beef breeding herd below those of previous cycles. The slightly larger cow inventory and the number of replacement heifers calving this year are expected to hold the 1990 calf crop at last year's level or increase it by 1 percent.

Table 5--January 1 feeder cattle supply

Item	1984	1985	1986	1987	1988	1989	1990	1990 / 1989
	1,000 head							Percent change
Calves -500 lb								
On farms	27,540	26,373	24,397	22,995	21,008	20,152	19,348	-4.0
On feed 1/	601	533	425	479	455	319	469	+47.0
Total	26,939	25,840	23,972	22,516	20,553	19,833	18,879	-4.8
Steers & Heifers 500 lb + 2/								
On farms	24,019	24,295	23,973	22,983	23,573	23,404	24,160	+3.2
On feed 1/	10,945	11,863	11,241	10,752	11,364	11,059	11,099	+0.4
Total	13,074	12,432	12,732	12,231	12,209	12,345	13,061	+5.8
Total supply	40,013	38,272	36,704	34,747	32,762	32,179	31,940	-0.7

1/ Estimated U.S. steers and heifers. 2/ Not including heifers for cow replacements.

Table 6--13-States cattle on feed, placements, marketings, and other disappearance

Year	On feed 1/	Percent change 2/	Place- ments	Percent change 2/	Fed mar- ketings	Percent change 2/	Other dis- apperance	Percent change 2/
	1,000 head	Percent	1,000 head	Percent	1,000 head	Percent	1,000 head	Percent
1985								
I	10,653	7.5	5,315	-3.6	5,907	3.4	373	2.2
II	9,688	3.7	5,266	-5.7	5,787	3.0	427	-25.3
III	8,740	0.1	5,522	-11.8	5,949	4.7	246	-8.2
IV	8,067	10.8	7,500	-.7	5,269	-4.6	314	-24.7
Year	---	---	23,603	-5.2	22,912	1.7	1,360	-16.2
1986								
I	9,984	-6.3	5,270	-.8	5,763	-2.4	316	-15.3
II	9,175	-5.3	5,221	-.9	5,821	.6	375	-12.2
III	8,200	-6.2	6,376	15.5	5,926	-.4	233	-5.3
IV	8,417	4.3	6,906	-7.9	5,456	3.5	312	-.6
Year	---	---	23,773	.7	22,966	.2	1,236	-9.1
1987								
I	9,555	-4.3	5,670	7.6	5,747	-.3	376	19.0
II	9,102	-.8	5,936	13.7	5,649	-3.0	428	14.1
III	8,961	9.3	6,650	4.3	6,082	2.6	242	3.9
IV	9,287	10.3	6,818	-1.3	5,648	3.5	343	9.9
Year	---		25,074	5.5	23,126	.7	1,389	12.4
1988								
I	10,114	5.9	5,824	2.7	5,853	1.8	390	3.7
II	9,695	6.5	5,913	-.4	5,879	4.1	423	-1.2
III	9,306	3.9	6,031	-9.3	6,261	2.9	225	-7.0
IV	8,851	-4.7	6,655	-2.4	5,466	-3.2	352	2.6
Year	---		24,423	-2.6	23,459	1.4	1,390	.1
1989								
I	9,688	-4.2	6,232	7.0	5,658	-3.3	344	-11.8
II	9,918	2.3	5,212	-11.9	6,040	2.7	410	-3.1
III	8,680	-6.7	5,719	-5.2	5,896	-5.8	227	.9
IV	8,276	-6.5	7,321	10.8	5,361	-1.9	293	-16.8
Year			24,484	.2	22,955	-2.1	1,274	-8.3
1990								
I	9,943	2.6			5,685 3/	.5		

1/ Beginning of quarter. 2/ Percent change from previous year. 3/ Expected marketings.

Table 7--7-States cattle on feed, placements, and marketings

Year	On feed	Percent change 1/	Net placements	Percent change 1/	Marketings	Percent change 1/	Other dis-appearance	Percent change 1/
	1,000 head	Percent	1,000 head	Percent	1,000 head	Percent	1,000 head	Percent
1987								
Jan.	7,953	-2.4	1,708	+14.3	1,793	+2.5	127	+46.0
Feb.	7,614	-3.5	1,337	+18.5	1,478	+0.5	105	+14.1
Mar.	7,473	-1.0	1,625	+3.9	1,571	-1.4	94	+9.3
Apr.	7,527	-0.1	1,562	+9.6	1,541	-5.5	139	+15.8
May	7,548	+2.9	1,841	+13.4	1,514	-7.4	143	+8.3
June	7,875	+7.5	1,345	+22.8	1,732	+5.1	87	+29.9
July	7,488	+10.6	1,218	-17.7	1,723	+1.8	71	+10.9
Aug.	6,983	+6.4	1,847	+5.4	1,732	+2.2	68	-2.9
Sept.	7,098	+7.2	2,403	+16.4	1,671	+1.2	71	+20.3
Oct.	7,830	+11.4	2,529	+7.5	1,700	+7.1	85	+4.9
Nov.	8,659	+11.1	1,571	-11.1	1,478	+1.1	108	+24.1
Dec.	8,752	+8.0	1,271	-9.9	1,612	+3.4	119	+14.4
1988								
Jan.	8,411	+5.8	1,557	-8.8	1,764	-1.6	106	-16.5
Feb.	8,204	+7.7	1,253	-6.3	1,545	+4.5	126	+20.0
Mar.	7,912	+5.9	1,737	+6.9	1,593	+1.4	111	+18.1
Apr.	8,056	+7.0	1,382	-11.5	1,609	+4.4	139	0
May	7,829	+3.7	2,029	10.2	1,724	+13.9	146	+2.1
June	8,134	+3.3	1,319	-1.9	1,717	-0.9	68	-21.8
July	7,736	+3.3	1,189	-2.4	1,785	+3.6	62	-12.7
Aug.	7,140	+2.2	1,594	-13.7	1,790	+3.3	66	-2.9
Sept.	6,944	-2.2	2,142	-10.9	1,682	+0.7	67	-5.6
Oct.	7,404	-5.4	2,366	-6.4	1,576	-7.3	84	-1.2
Nov.	8,194	-5.4	1,578	+0.4	1,517	+2.6	112	+3.7
Dec.	8,255	-5.7	1,306	+2.8	1,516	-6.0	115	-3.4
1989								
Jan.	8,045	-4.4	1,602	+2.9	1,677	-4.9	104	-1.9
Feb.	7,970	-2.9	1,495	+19.3	1,534	-0.7	115	-8.7
Mar.	7,931	+0.2	1,900	+9.4	1,579	-0.9	75	-32.4
Apr.	8,252	+2.4	1,415	+2.4	1,580	-1.8	124	-10.8
May	8,087	+3.3	1,460	-28.0	1,752	+1.6	164	+12.3
June	7,795	-4.2	1,231	-6.7	1,791	+4.3	62	-8.8
July	7,235	-6.5	1,228	+3.3	1,700	-4.8	63	+1.6
Aug.	6,763	-5.2	1,562	-2.0	1,694	-5.4	76	+15.2
Sept.	6,631	-4.5	1,906	-11.0	1,579	-6.1	47	-29.9
Oct.	6,958	-6.0	2,581	+9.1	1,628	+3.3	71	-15.5
Nov.	7,911	-3.4	1,910	+21.0	1,490	-1.8	91	-18.8
Dec.	8,331	+0.9	1,465	+12.2	1,418	-6.5	87	-24.3
1990								
Jan.	8,378	+4.1	1,782	+11.2	1,634	-2.6	114	+9.6
Feb.	8,526	+7.0						

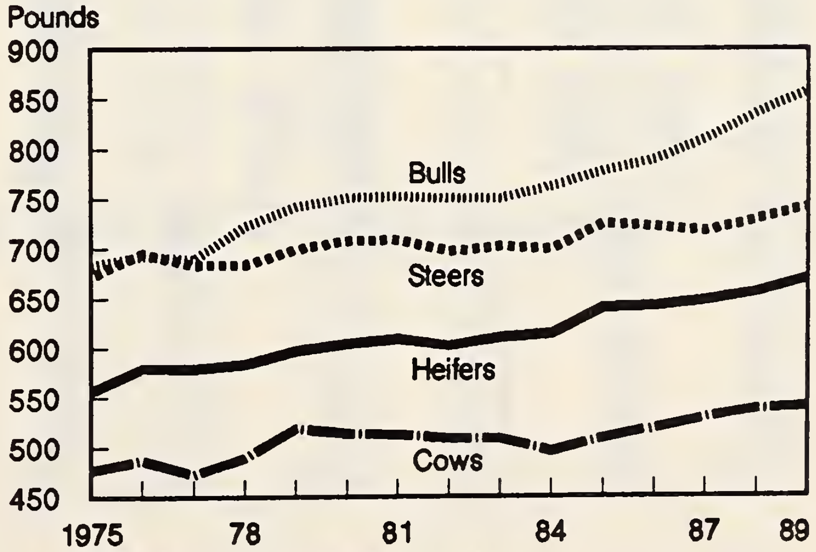
1/ Percent change is from previous year.

In 1989, operations with beef cows totaled 949,640, off 2 percent from the year before. The average number of beef cows per operation was 35.5, compared with 34.5 a year earlier. The number of operations with beef cows is expected to continue declining while the average operator's herd size increases modestly during the expansion phase.

Supply of Feeder Cattle Outside Feedlots Down

Total lightweight (under 500 pounds) and heavyweight (over 500 pounds) feeder cattle outside feedlots on January 1, 1990 were estimated to be down 1 percent. Lightweight feeders declined about 5 percent from a year earlier. Last fall, expanded numbers of lightweight feeders were placed on feed due to the drought conditions in many winter wheat grazing areas. However, the January 1, 1990 heavyweight inventory outside feedlots expanded nearly 6 percent and will be available for placement during the first half of 1990.

Figure 2
Average Carcass Weights



Federally inspected. Derived by averaging monthly data.

Table 8--Federally inspected cattle slaughter

Week ended	Cattle			Steers			Cows: Total			Cows: Dairy			Cows: Dairy/total		
	1988	1989	1990	1988	1989	1990	1988	1989	1990	1988	1989	1990	1988	1989	1990
	Thousands												Percent		
Jan.															
6	664	543	548	328	256	263	131	119	120	64	64	57	49	54	48
13	723	627	622	359	290	282	126	131	146	62	68	69	49	52	47
20	703	654	599	353	313	280	126	129	132	60	65	61	48	50	46
27	675	640	637	340	310	318	119	124	120	57	62	59	48	50	49
Feb.															
3	646	624	638	335	300	309	116	113	122	58	60	60	50	53	49
10	639	605		332	300		106	103		55	56		52	55	
17	637	644		316	319		118	119		59	64		50	54	
24	640	628		314	309		121	108		60	62		49	57	
Mar.															
3	616	639		304	316		114	114		56	62		49	54	
10	609	600		298	312		105	104		54	57		52	55	
17	622	588		307	288		106	119		54	61		51	51	
24	607	584		304	286		108	114		53	57		49	49	
31	617	587		316	286		106	111		51	57		48	51	
Apr.															
7	600	609		310	300		101	118		50	57		50	48	
14	619	646		315	335		110	117		54	56		49	48	
21	670	663		349	332		108	122		50	56		46	46	
28	674	652		356	332		109	122		50	54		46	44	
May															
5	664	666		358	326		104	128		46	56		44	44	
12	664	670		344	339		109	118		47	50		43	43	
19	682	675		348	344		118	115		48	50		41	44	
26	689	673		355	342		125	115		52	50		42	44	
June															
2	575	589		298	301		96	99		39	42		41	43	
9	681	662		336	328		120	114		50	49		42	43	
16	678	680		338	339		129	114		53	53		41	46	
23	678	658		344	331		120	109		50	48		42	44	
30	682	671		348	329		119	112		50	50		42	44	
July															
7	609	564		306	288		108	79		51	37		48	47	
14	724	691		341	335		135	122		62	56		46	46	
21	691	672		359	326		116	115		55	55		47	48	
28	694	638		346	312		112	106		57	52		51	49	
Aug.															
4	678	642		339	326		111	103		54	53		49	51	
11	694	673		346	332		112	107		56	54		50	50	
18	688	652		337	315		115	112		54	56		47	48	
25	678	630		328	304		121	114		58	57		48	49	
Sept															
1	703	646		326	316		116	111		55	49		47	51	
8	614	561		288	276		101	97		49	58		49	50	
15	692	657		333	327		124	118		58	56		47	49	
22	672	666		332	316		119	117		58	56		49	48	
29	667	669		316	324		118	120		58	56		49	46	
Oct.															
6	674	660		309	310		125	126		56	57		46	45	
13	680	662		311	309		127	128		56	57		44	45	
20	673	647		312	303		132	132		58	58		44	44	
27	676	652		310	297		143	142		64	60		45	42	
Nov.															
3	656	643		304	292		140	139		62	61		44	44	
10	621	631		298	292		134	139		62	59		46	42	
17	623	635		286	292		140	143		63	60		45	42	
24	546	533		260	262		110	111		51	47		46	42	
Dec.															
1	648	660		298	301		145	146		67	62		46	43	
8	624	643		300	299		140	149		66	63		47	42	
15	623	635		306	304		126	133		62	58		50	44	
22	622	632		305	298		116	124		58	53		50	43	
29	549	557		281	273		90	99		46	42		51	42	

1/ Corresponding dates to 1990: 1988, Jan. 9, 1989, Jan. 7.

Feeder supplies in the last half of 1990 likely will be reduced due to greater retention of replacement heifers and low numbers of lightweight feeder cattle in the present inventory. Feeder cattle prices are expected to average near last year's $86 per cwt for 1990, with higher prices in the winter and spring quarters. Tight supplies and high feeder cattle prices are expected to continue to support positive returns for cow-calf operators and encourage breeding herd expansion.

January Inventory of Cattle On Feed Above a Year Ago

The January 1, 1990 U.S. cattle on feed inventory rose 2 percent to 11.6 million head. Cattle on feed in the 13 quarterly reporting States were up 3 percent to 9.9 million. The 13 quarterly reporting States represented over 85.5 percent of the U.S. total, compared with 84.6 percent a year earlier. Nearly 8.4 million were on feed within the seven monthly reporting States, also which constituted an increased share of the total. Last fall, net placements on feed in the 13 States' feedlots rose nearly 12 percent above a year earlier, to the highest level since 1985. Large placements were partly induced by dry conditions and lack of winter wheat pastures. Net placements for all of 1990 are expected to slightly exceed last year's 23.2 million head. This should expand 1990 fed cattle marketings by about 3 percent over a year earlier. The largest fed cattle marketings are expected during the spring and summer quarters, when the expanded placements of last fall and early winter are marketed.

The number of cattle on feed February 1 in the seven monthly reporting States was up 7 percent from a year ago. Placements in January were up 11 percent from a year ago, with sharp increases in all monthly reporting States except Kansas. Marketings slipped 3 percent below a year ago.

This year's lower feed costs are anticipated to reduce feedlot costs of gain to the low 50-cent-per-pound range. Breakeven feed and feeder costs for the winter months will likely range from the upper $70's to the low $80's per cwt for Great Plains custom feedlots—near or below fed cattle prices. Choice steer prices between $74-78 per cwt are expected for the winter quarter. Declining fed cattle prices are anticipated into the spring and summer quarters as fed marketings increase.

Table 9--Commercial calf slaughter and production

Year	Slaughter	Dressed weight	Production
	1,000 head	Pounds	Million pounds
1986			
I	873	148	129
II	836	154	129
III	859	150	129
IV	839	145	122
Year	3,408	149	509
1987			
I	760	147	112
II	651	155	101
III	684	145	99
IV	720	144	104
Year	2,815	148	416
1988			
I	647	150	97
II	567	162	92
III	665	149	99
IV	627	158	99
Year	2,506	154	387
1989			
I	583	156	91
II	488	174	85
III	548	153	84
IV	553	152	84
Year	2,172	158	344

Table 10--Calf slaughter by class under Federal inspection

Year	Bob veal 150 lb & below	Fed Formula 150-400 lb	Fed Nonformula 150-400 lb	Other over 400 lb	Total
			1,000 head		
1986	1,618.6	1,009.3	285.9	281.0	3,194.8
1987					
Jan	115.9	87.1	15.1	29.5	247.6
Feb.	104.5	82.2	13.3	24.7	224.7
Mar.	120.5	90.2	13.8	26.6	251.1
Apr.	89.4	86.8	15.5	23.2	214.9
May	70.0	80.7	14.4	24.0	189.1
Jun.	81.3	94.2	13.3	25.7	214.5
July	101.3	80.8	12.1	26.0	220.2
Aug.	101.6	64.2	14.8	21.8	202.4
Sept.	99.4	91.0	14.0	24.2	228.6
Oct.	102.8	85.6	19.3	25.4	233.1
Nov.	103.5	70.4	12.3	25.1	211.3
Dec.	117.6	89.5	13.5	21.3	241.9
Year	1,207.8	1,002.7	171.4	297.5	2,679.4
1988					
Jan.	92.5	82.0	12.5	18.1	205.1
Feb.	86.5	84.9	16.2	15.2	202.8
Mar.	96.3	92.8	11.4	15.3	215.8
Apr.	65.3	78.7	10.8	14.3	169.1
May	58.1	80.7	17.1	15.4	171.3
Jun.	82.1	90.4	14.2	17.1	203.8
July	106.3	74.2	14.1	12.4	207.0
Aug.	111.7	86.3	12.2	16.7	226.9
Sept.	92.7	85.0	13.1	16.5	207.3
Oct.	84.6	84.7	11.9	15.8	197.0
Nov.	94.7	81.4	11.3	14.1	201.5
Dec.	95.1	82.2	11.1	14.2	202.6
Year	1,065.9	1,003.3	155.9	185.1	2,410.2
1989					
Jan.	83.4	83.6	10.3	18.3	195.6
Feb.	75.7	76.6	7.7	15.3	175.3
Mar.	83.1	84.6	9.9	16.7	194.3
Apr.	46.3	74.5	7.3	23.9	152.0
May	54.7	77.9	9.3	15.4	157.3
June	56.4	81.6	8.1	15.1	161.2
July	97.1	82.8	10.3	16.6	206.8
Aug.	87.8	76.1	8.3	16.9	189.1
Sept.	77.3	68.4	10.6	16.7	173.0
Oct.	80.6	86.7	11.2	12.2	190.7
Nov.	81.6	70.5	10.5	12.4	175.0
Dec.	74.2	70.5	8.9	13.3	166.9
Year	898.2	933.8	112.4	192.8	2,137.2

Table 11--Beef, Choice Yield Grade 3: Retail, carcass, and farm values, spreads, and farmers' share

Year	Retail price 1/	Gross carcass value 2/	By-product allow-ance 3/	Net carcass value 4/	Gross farm value 5/	By-product allow-ance 6/	Net farm value 7/	Farm retail-spread: Total	Farm retail-spread: Carcass-retail	Farm retail-spread: Farm-carcass	Farmers' share 8/
	Cents per pound										Percent
1985	232.6	137.0	1.8	135.2	142.2	15.4	126.8	105.8	97.4	8.4	55
1986	230.7	134.3	1.2	133.1	140.0	15.6	124.4	106.3	97.6	8.7	54
1987	242.5	146.7	1.4	145.3	157.6	19.7	137.9	104.6	97.2	7.4	57
1988	254.7	155.6	1.7	153.9	169.4	22.0	147.4	107.3	100.8	6.5	58
I	245.9	150.7	1.7	149.0	166.0	23.2	142.8	103.1	96.9	6.2	58
II	254.4	162.2	1.8	160.4	176.2	23.2	153.0	101.4	94.0	7.3	60
III	258.9	151.3	1.7	149.6	163.9	21.6	142.2	116.7	109.3	7.4	55
IV	259.4	158.2	1.7	156.5	171.4	20.0	151.4	108.0	102.9	5.1	58
1989	269.9	162.2	1.6	160.6	176.6	20.9	155.4	114.5	109.3	5.2	58
I	266.3	164.3	1.6	162.7	179.6	20.5	159.1	107.2	103.6	3.6	60
II	269.9	166.8	1.6	165.2	179.3	20.1	159.2	110.7	104.7	6.0	59
III	270.7	156.2	1.4	154.8	169.8	21.0	148.8	121.9	115.9	6.0	55
IV	272.7	161.3	1.5	159.8	176.4	21.9	154.5	118.2	112.9	5.3	57
1990											
Jan.	281.3	170.3	1.6	168.7	186.0	22.7	163.3	118.0	112.6	5.4	58

1/ Estimated weighted-average of BLS prices of retail cuts from Choice Yield Grade 3 carcass. 2/ Value of carcass-quantity equivalent to 1 lb of retail cuts. A wholesale-carcass equivalent of 1.476 is used. 3/ Portion of gross carcass value attributed to fat and bone trim. 4/ Gross carcass value minus carcass byproduct allowance. 5/ Market value to producer for 2.4 lb of live animal, equivalent to 1 lb of retail cuts. 6/ Portion of gross farm value attributed to edible and inedible byproducts. 7/ Gross farm value minus farm byproduct allowance. 8/ Percent net farm value is of retail price.

The trend toward fewer and larger cattle feedlots continues, probably indicating further loss of seasonal feedlot operations and a shift to year-round feeding in larger-capacity lots. The number of feedlots reported in the 13 major States on January 1, 1990 was 46,883, down about 1 percent from the past year. Large-scale feedlots (having a one-time capacity of 32,000 head or greater) represented less than two-tenths of 1 percent of the total lots, but marketed nearly 32 percent of the fed cattle in 1989. Several firms own or control more than one large-scale feedlot, suggesting that operators of several feedlots may be able to take advantage of pecuniary economies.

NASS recently released *Cattle Final Estimates*, 1984-88, and Cattle, 1990. Particularly large upward revisions were made for Iowa's fed cattle sector. Iowa remains the fifth-largest marketer of fed cattle, after Nebraska, Texas, Kansas, and Colorado.

Per Capita Beef Consumption To Hold Steady or Decline in 1990

Despite the 2-percent rise in commercial beef production in 1990, per capita beef consumption is expected to be unchanged to slightly below last year's 69 pounds (retail weight basis). Beef imports are expected to decline about 2 percent and exports to expand by 10 to 12 percent, which will reduce domestic consumption from last year. Frozen beef stocks at the beginning of the year were reported at 326 million pounds, carcass weight, 23 percent less than a year earlier. Frozen beef stocks are expected to remain well below the previous year throughout 1990.

Retail beef prices are projected to increase 1 to 3 percent per pound in 1990 from last year's average $2.70 per pound. Record large total meat supplies and slower economic growth will likely prevent a much greater price advance for retail beef in 1990.

Veal Production and Consumption Down in 1990

Total calf slaughter will likely decline further in 1990 to around 2.2 million head, down 1 percent from last year. Calf slaughter is expected to continue to show stable or growing numbers of formula-fed calves in the slaughter mix, which should result in steady or increasing average dressed carcass weight. Overall, veal production is expected to decline about 1 percent. Total veal consumption will decrease slightly but will still remain around 1.2 pounds per capita.

A New Cattle Cycle Begins

If a cattle cycle is defined as a period of herd rebuilding (expansion phase) followed by a period of herd reduction (liquidation phase) in annual statistics, the January 1, 1990 inventory signaled the beginning of the seventh cycle since 1928. Its last cycle, 1979-89, behaved quite differently than the preceding five cycles. The expansion phase lasted only 3 years, and the herd expanded only 4.5 percent, compared with an average of about 22 percent usually spanning 6 to 8 years. The 1979-89 cycle's liquidation phase lasted 7 years and produced about a 16-percent decline, the second-largest percentage liquidation of the six cycles. The liquidation phase averaged about 10 percent, and typically lasted 3 or 4 years. The low and high of the 1979-89 cycle were both below those of the previous cycle, due to the very short expansion and extended liquidation.

Herd rebuilding in this cycle is expected to be moderate—equaling only 1 to 2 percent per year. This expected rate may be compared with annual average expansion rates in the previous six cycles of over 3 percent per year for the second through the fifth years into the expansion phase. However, the two cycles during World War II and the Korean War had very high annual herd expansion rates of 6 to 7 percent per year, which increased the averages.

This cycle is expected to peak in the mid- to late 1990's at 108 to 110 million head, compared with 115.4 million in the last cycle. This would be an 8- to 10-percent expansion, well up from 4.5-percent expansion in the last cycle, but still below the average of the preceding six cycles. ion, well up from 4.5-percent expansion in the last cycle, but still below the average of the preceding six cycles. A slower-than-average rate of the herd rebuilding may prolong this expansion phase from that of the last cycle.

Cattle Cycle-January 1 Cattle Inventory

Year/Phase 1/	1928	1938	1949	1958	1967	1979	1989	1928-90 Average
				1,000 Head				
Start	57,322 LW	65,249 LW	76,830 LW	91,176 LW	108,783 LW	110,864 LW	99,180 LW	
1	58,877	66,029	77,963	93,322	109,371	111,242	99,337	
2	61,003	68,309	82,083 KW	96,236	110,015	114,351		
3	63,030	71,755 WW	88,072 KW	97,700	112,369	115,444 HI		
4	65,801	76,025 WW	94,241 KW	100,369	114,578	115,100		
5	70,280	81,204 WW	95,679	104,488	117,862 PC	113,360		
6	74,369 HI	85,334 WW	96,592 HI	107,903	121,539	109,582		
7	68,846	85,573 HI	95,900	109,000 HI	127,788	105,378		
8	67,847	82,235	92,860	108,862	132,028 HI	102,118		
9	66,098	80,554	91,176 LW	108,783 LW	127,980	99,622		
10	65,249 LW	77,171			122,810	99,180 LW		
11		76,830 LW			116,375			
12					110,864 LW			
				Annual percentage				
1	102.7	101.2	101.5	102.4	100.5	100.3	100.2	101.4
2	103.6	103.5	105.3	103.1	100.6	102.8		103.1
3	103.3	105.0	107.3	101.5	102.1	101.0 HI		103.4
4	104.4	106.0	107.0	102.7	102.0	99.6		103.6
5	106.8	106.8	101.5	104.1	102.9	98.6		103.4
6	105.8 HI	105.1	101.0 HI	103.3	103.1	96.7		102.5
7	92.6	100.3 HI	99.3	101.0 HI	105.1	96.2		99.1
8	98.5	96.1	96.8	99.9	103.3 HI	96.9		98.6
9	97.4	98.0	98.2	99.9	96.9	97.6		98.0
10	98.7	95.8			96.0	99.6		
11		99.6			94.8			
12					95.3			
			Cycle beginning low to high, high to ending low percentage					
Exp.	129.7	131.0	125.7	119.5	121.4	104.1		121.9
Liq.	87.7	89.8	94.4	99.8	84.0	85.9		91.0

1/Beginning year of cattle cycle from cyclic low point. LW= low; HI= high; WW= World War II; KW= Korean War; PC= price controls; Exp.= expansion; Liq.= liquidation.

Longer-Term Tendencies in the Cattle Sector

Since the 1950's, calf slaughter has generally worked downward both in absolute numbers and as a percentage of the calf crop. For 1989, preliminary calf slaughter equaled around 2.2 million head, the lowest since 1950. Historically, calf slaughter has typically consisted of dairy-type rather than beef calves except for periods of extreme herd liquidation, such as the mid-1970's. However, demand for formula-fed veal will likely stabilize total calf slaughter in coming years.

The composition of the cow herd has shifted from dairy toward beef cows. In 1950, the dairy cow inventory was greater than the beef cow inventory; today there are about three beef cows for every dairy cow. The demand for fed beef has greatly expanded the feedlot sector since the mid-1950's and stimulated the shift toward beef-type cattle. In recent years, economic incentives have even drawn increasing numbers of dairy-type male calves into feeding programs. The growing importance of the cattle feedlot sector has expanded the proportion of fed cattle in the slaughter mix.

Annual live cattle imports since 1950 have exceeded exports for a positive net cattle trade balance. In recent years, the net trade balance comprised only about 1 percent of the total inventory, and imports have ranged between 1.2 and 1.4 million head—the highest levels since the 1950's. Feeder steers from Mexico make up the largest share of imports, but vary widely with changing Mexican trade policies and weather conditions. The recent reduction in Mexican export tariffs will likely sustain high imports from that nation in coming years.

Total beef production (commercial plus farm slaughter) totaled about 9.25 billion pounds in 1950 and 23.1 billion in 1989, an increase of about two and a half times. Over the same period, total cattle slaughter rose less than twofold. Average cattle carcass weight has risenby more than one-third, and the tendency toward higher carcass weights is expected to continue.

Figure 3
Commercial Calf Slaughter

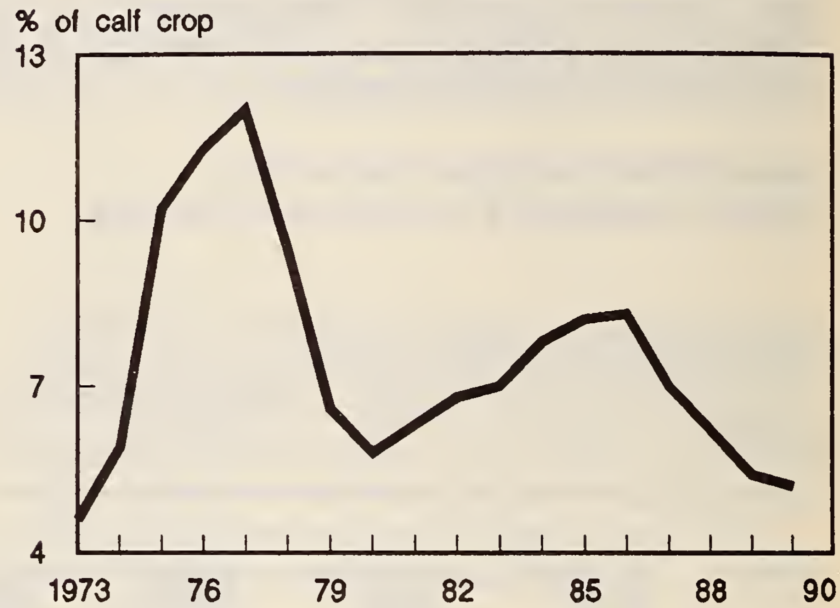


Table 12--Cattle balance sheet

Year	On farms Jan. 1	Im-ports	Calf crop	Total supply	Slaughter Cattle	Slaughter Calves	Death loss	Ex-ports	Disap-pearance	To balance	On farms Dec. 31
					1,000 head						
1950	77,963	461	34,899	113,323	18,614	10,501	3,742	8	32,865	+1,625	82,083
1951	82,083	239	35,825	118,147	17,084	8,902	3,863	8	29,857	-218	88,072
1952	88,072	140	38,273	126,485	18,625	9,388	4,034	11	32,058	-186	94,241
1953	94,241	198	41,261	135,700	24,465	12,200	4,060	15	40,740	+719	95,679
1954	95,679	86	42,601	138,366	25,889	13,270	4,063	21	43,243	+1,469	96,592
1955	96,592	314	42,112	139,018	26,587	12,864	4,052	35	43,538	+420	95,900
1956	95,900	159	41,376	137,435	27,755	12,999	3,912	37	44,703	+128	92,860
1957	92,860	728	39,905	133,493	27,068	12,353	3,801	44	43,266	+949	91,176
1958	91,176	1,152	38,860	131,188	24,368	9,738	3,810	26	37,942	+76	93,322
1959	93,322	709	38,938	132,969	23,722	8,072	3,876	51	35,721	-1,012	96,236
1960	96,236	663	39,416	136,315	26,029	8,615	4,100	32	38,776	+161	97,700
1961	97,700	1,043	40,180	138,923	26,471	8,080	4,018	24	38,593	+39	100,369
1962	100,369	1,250	41,441	143,060	26,911	7,857	4,125	19	38,912	+340	104,488
1963	104,488	852	42,268	147,608	28,070	7,204	4,040	23	39,337	-368	107,903
1964	107,903	547	43,809	152,259	31,678	7,632	4,232	62	43,604	+345	109,000
1965	109,000	1,128	43,922	154,050	33,171	7,788	4,248	54	45,261	+73	108,862
1966	108,862	1,100	43,537	153,499	34,173	6,863	4,049	35	45,120	+404	108,783
1967	108,783	752	43,803	153,338	34,297	6,110	4,045	55	44,507	+540	109,371
1968	109,371	1,039	44,315	154,725	35,418	5,616	4,012	36	45,082	+372	110,015
1969	110,015	1,042	45,177	156,234	35,573	5,011	4,123	39	44,746	+881	112,369
1970	112,369	1,168	45,871	159,408	35,356	4,203	4,297	88	43,944	-886	114,578
1971	114,578	991	46,738	162,307	35,905	3,825	4,442	93	44,265	-180	117,862
1972	117,862	1,186	47,682	166,730	36,134	3,201	5,126	104	44,565	-626	121,539
1973	121,539	1,039	49,194	171,772	34,102	2,404	6,487	273	43,266	-718	127,788
1974	127,788	568	50,873	179,229	37,353	3,175	6,110	204	46,842	-359	132,028
1975	132,028	389	50,183	182,600	41,464	5,406	6,992	196	54,058	-562	127,980
1976	127,980	984	47,384	176,348	43,199	5,527	5,190	205	54,121	-583	122,810
1977	122,810	1,133	45,931	169,874	42,381	5,692	6,000	107	54,180	+681	116,375
1978	116,375	1,253	43,818	161,446	39,970	4,302	5,800	122	50,194	-388	110,864
1979	110,864	732	42,596	154,192	34,005	2,927	5,600	66	42,598	-352	111,242
1980	111,242	681	44,938	156,861	34,116	2,679	5,413	66	42,274	-236	114,351
1981	114,351	680	44,666	159,697	35,265	2,886	5,059	88	43,298	-955	115,444
1982	115,444	1,005	44,200	160,649	36,158	3,106	5,429	58	44,751	-897	115,001
1983	115,001	921	43,885	159,807	36,974	3,162	5,494	56	45,686	-761	113,360
1984	113,360	753	42,470	156,583	37,892	3,367	5,464	71	46,794	-207	109,582
1985	109,582	836	41,050	151,468	36,593	3,455	5,046	125	45,219	-871	105,378
1986	105,378	1,407	41,182	147,967	37,568	3,478	4,998	108	46,152	+303	102,118
1987	102,118	1,200	40,152	143,470	35,890	2,902	4,800	131	43,723	-125	99,622
1988	99,622	1,332	40,588	141,542	35,324	2,565	4,626	321	42,836	+474	99,180
1989	99,180	1,459	40,142	140,781	34,153*	2,223*	4,440*	169	40,985	-459	99,337
1990	99,337										

*Preliminary.

U.S. Cattle and Beef Trade

Live Cattle Imports

U.S. feeder cattle imports from Mexico were up substantially in November and December and, with still-strong imports from Canada, total imports in 1989 reached 1.459 million head, up 10 percent from 1988. The reduction in Mexican export tariffs should strengthen imports from that country in 1990, but some reduction in cattle imported from Canada could lower total imports to about 1.3 million head.

Mexican policy has shifted to encourage production for export to increase domestic earnings. In the past, the Mexican Government has limited cattle exports to increase domestic supplies of beef and keep prices down; however, this and other policies have deterred cattle herd expansion. Mexican feeder cattle exports to the United States are forecast to increase because of the tariff reduction, weather damage to pastures, and the reorientation towards trade.

Cattle imports from Canada are forecast to decline. Dairy herd liquidation in Canada is slowing, and the new slaughter facility in Alberta will likely process fed cattle that might otherwise be exported to the United States.

Table 13--Imports of feeder cattle and calves and hogs from Canada and Mexico

Year	Feeder cattle and calves		Hogs
	Canada	Mexico	Canada
		Number	
1987			
July	14,568	28,333	40,183
Aug.	13,461	3,419	34,300
Sept.	11,138	12	37,560
Oct.	17,638	0	35,499
Nov.	20,549	4,950	31,787
Dec.	21,577	288,173	50,849
Total	244,710	934,932	445,863
1988			
Jan.	28,013	304,053	58,942
Feb.	29,193	233,635	43,759
Mar.	34,848	95,394	53,682
Apr.	30,899	58,169	55,393
May	44,319	32,816	51,366
June	41,631	5,043	62,137
July	25,098	0	53,360
Aug.	48,177	8	83,256
Sept.	56,200	0	104,310
Oct.	53,307	178	108,945
Nov.	56,006	4,184	106,901
Dec.	29,016	107,805	53,074
Total	476,707	841,285	835,125
1989			
Jan.	52,285	105,822	162,762
Feb.	34,515	146,996	103,245
Mar.	39,386	132,921	144,106
Apr.	46,410	108,428	65,383
May	61,756	9,401	74,488
June	58,534	233	70,821
July	19,379	3,429	35,796
Aug.	51,205	4,172	111,765
Sept.	50,484	716	74,946
Oct.	65,841	509	79,625
Nov.	54,132	132,404	61,972
Dec.	40,861	228,357	88,255
Total	573,408	873,388	1,073,164

Table 14--U.S. live cattle trade 1/

Country or area	1988	1989	Percent change
	Thousand head		Percent
Imports			
Mexico	844.2	873.6	3.5
Canada	487.5	584.1	19.9
Other	.5	1.1	142.1
Total	1,332.2	1,459.4	9.5
Exports			
Mexico	257.1	124.9	-51.4
Canada	15.3	23.6	54.7
Other	20.6	20.6	-58.1
Total	321.4	169.1	-47.4

1/ May not add due to rounding. Percent change calculated from unrounded data.

U.S. Beef Exports to Japan Continue To Climb

U.S. beef and veal exports rose 54 percent in 1989 to 1,062 million pounds, carcass weight. Exports to Japan increased 59 percent and accounted for 75 percent of beef and veal exports in 1989. Exports to Canada and South Korea also increased substantially. In 1990, exports are forecast to climb at least an additional 13 percent because of greater shipments to Japan.

Japan's beef import quota for their fiscal year 1990 (JFY90, April 1990-March 1991) will be 394,000 metric tons, up 60,000 tons (132 million pounds) from JFY89. Growth in U.S. exports to Japan may not be as strong as last year. There will be some additional competition from Australian beef as that nation's output increases.

Exports to South Korea are forecast to continue climbing. The United States is currently negotiating with the South Korean Government to set a timetable for liberalizing that country's beef market. Similar negotiations are being held between South Korea and Australia.

Table 15--U.S. beef and veal trade, carcass weight 1/

Country or area	1988	1989	Percent change
	Million pounds		Percent
Imports			
Australia	1,081.5	818.4	-24.3
New Zealand	641.0	658.4	2.7
Canada	172.0	239.2	39.1
Brazil	117.8	78.2	-33.6
Argentina	184.2	189.3	2.7
Central America	177.2	170.3	-3.9
Other	32.0	21.6	-32.5
Total	2,405.8	2,175.4	-9.6
Exports			
Japan	503.5	799.0	58.7
Canada	52.6	93.9	78.4
Caribbean	22.9	21.7	-5.4
Korea, S.	16.1	54.5	239.5
Other	94.9	92.8	-2.2
Total	690.0	1,061.9	53.9

1/ Data may not add due to rounding. Percent change calculated from unrounded data.

Decline in U.S. Beef Imports To Continue

U.S. imports of beef and veal reached 2,175 million pounds in 1989, carcass weight, down 10 percent from the year before, primarily due to the drop in imports from Australia. In 1990 total imports are likely to be about the same to 2 percent lower than in 1989 because higher imports from Australia may be more than offset by lower supplies from New Zealand.

About 75 percent of New Zealand's beef production is exported, and about 75 percent of these exports go to the United States. U.S. imports from New Zealand were up sharply in the first half of 1989. New Zealand's cattle slaughter and exports to the United States rose substantially during that period because of drought. After the drought broke in May 1989, both slaughter and exports declined. The decrease in exports in the latter part of the year placed total U.S. imports from New Zealand for 1989 at 658 million pounds, about 3 percent higher than the previous year.

Imports from Australia totaled 818 million pounds in 1989, down 24 percent. Factors contributing to lower U.S. purchases include: wet weather in Australia at the beginning of the year, which delayed cattle slaughter; increased Japanese and South Korean beef demand; declining beef output as producers held back animals from slaughter to rebuild herds; and high saleyard prices and an unfavorable exchange rate.

However, U.S. imports from Australia were higher than expected in fourth-quarter 1989. Dry weather in northern Australia led to early culling of stock. This increased output available for export, together with a modest devaluation of the Australian dollar, made Australian beef more attractive to U.S. purchasers. In 1990, Australian production is forecast to increase in response to export demand and higher inventories.

Sheep and Lambs

Continued profitability in the sheep industry offset some of the dry weather conditions in major sheep producing areas, and has resulted in a 5-percent expansion in the sheep inventory during 1989. Increased ewe slaughter and sheep exports were offset by a large retention of younger ewes in the breeding flock. The increase in the breeding inventory indicates an expansion in lamb and mutton production.

The January 1, 1990 inventory of all sheep and lambs was up 5 percent from a year earlier to 11.4 million head. Revisions for the sheep and lamb inventory for 1984-88 have also been released, and show that the inventory did not decline as much as previously estimated during the mid- to late 1980's. Upward revisions in the 1988 inventory indicated that the sheep and lamb inventory actually declined about 90,000

Figure 4
Stock Sheep Inventory

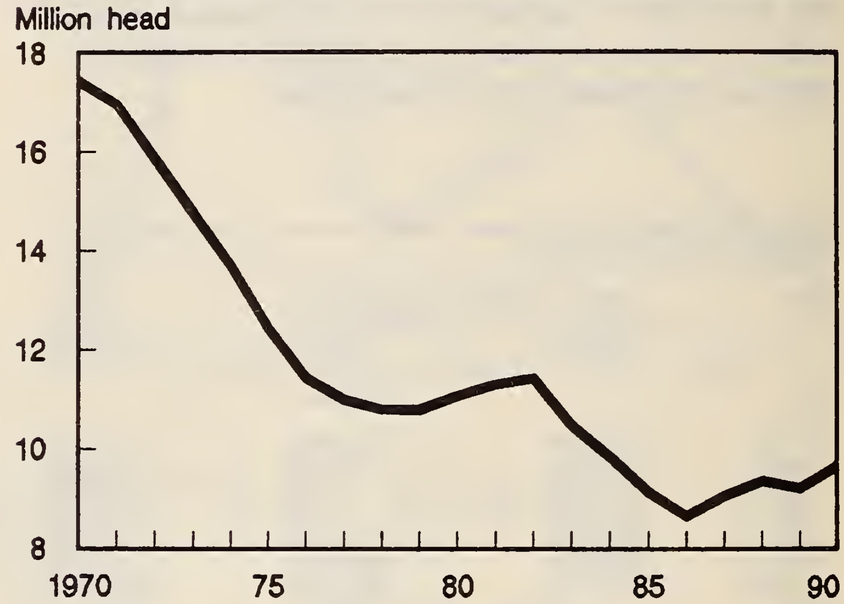


Table 16--Sheep inventory by classes, United States, January 1

Class	1984	1985	1986	1987	1988	1989	1990	1989/1990
				1,000 head				Percent
All sheep and lambs 1/	11,559	10,716	10,145	10,572	10,945	10,858	11,368	+5
On feed	1,718	1,586	1,487	1,513	1,581	1,646	1,717	+4
Stock sheep	9,841	9,130	8,658	9,059	9,364	9,212	9,651	+5
Lambs								
Ewes	1,243	1,078	1,060	1,311	1,323	1,344	1,338	0
Wethers and rams	319	297	321	378	352	346	309	-11
One year old and older								
Ewes	7,936	7,431	6,958	7,047	7,348	7,187	7,649	+6
Wethers and rams	343	323	318	333	342	334	356	+7

1/ New-crop lambs are not included.

Table 17--Balance sheet for sheep and lambs, United States

Year	On farms Jan. 1	Lamb crop	Net exports	Total slaughter	Deaths	Adjustment factor	On farms Dec. 31
				1,000 head			
1980	12,699	8,257	103	5,742	1,920	-244	12,947
1981	12,947	8,820	214	6,197	1,853	-506	12,997
1982	12,997	8,580	271	6,643	1,875	-648	12,140
1983	12,140	8,214	213	6,792	1,608	-182	11,559
1984	11,559	7,837	301	6,900	1,721	-242	10,716
1985	10,716	7,500	338	6,300	1,383	-50	10,145
1986	10,145	7,396	100	5,762	1,275	+168	10,572
1987	10,572	7,289	15	5,312	1,239	-350	10,945
1988	10,945	7,206	138	5,392	1,202	-561	10,858
1989	10,858	7,739	155	5,572*	1,195*	-307	11,368
1990	11,368						

*Estimated

head in 1989. Stock sheep inventory on January 1, 1990 was 9.7 million head, up 5 percent from a year earlier. Stock ewes 1 year old and older were up 6 percent at 7.6 million head, while ewe lambs were even with a year ago, at 1.3 million. The inventory of sheep and lambs on feed was up 4 percent on January 1, indicating slaughter will increase in first-quarter 1990.

Texas remained the largest stock sheep State with an inventory of 1.9 million head, up 11 percent from the previous year. At 250,000 head the ewe lamb inventory in Texas was down 7 percent from a year ago. California was the second-largest stock sheep State with 775,000 head, down 1 percent from 1989. The third largest stock sheep State was Wyoming with 740,000 head, up 3 percent.

Colorado remained the largest lamb feeding State as the number of sheep and lambs on feed increased 1 percent to 385,000 head. Texas was the second largest, with 200,000 head, up 18 percent; California was a close third, with 180,000 head, up 13 percent.

Table 18--Commercial sheep and lamb slaughter 1/ and production

Year	Lambs	Sheep	Total	Dressed weight	Production
	-------1,000 hd.-------			lb.	Mil lb.
1986					
I	1,438	72	1,510	60	90
II	1,246	97	1,343	58	78
III	1,324	80	1,404	58	81
IV	1,306	72	1,378	60	82
Year	3,514	321	5,635	59	331
1987					
I	1,213	57	1,270	60	76
II	1,211	79	1,290	58	75
III	1,241	75	1,316	59	77
IV	1,253	70	1,323	61	81
Year	4,918	281	5,199	59	309
1988					
I	1,292	62	1,354	63	85
II	1,178	82	1,260	63	80
III	1,255	80	1,335	60	80
IV	1,265	79	1,344	62	84
Year	4,990	303	5,293	62	329
1989					
I	1,306	66	1,372	63	87
II	1,197	96	1,293	62	80
III	1,263	101	1,364	60	82
IV	1,353	82	1,435	64	92
Year	5,119	345	5,464	62	341

1/ Classes estimated.

The increased inventory of stock sheep and lambs 1 year old and older and the large lamb crop in 1989 should boost sheep and lamb slaughter this year. The 1989 lamb crop totaled 7.7 million head, up 7 percent from a year earlier due to the highest lambing rate on record. The lambing rate—the average number of lambs born per 100 ewes 1 year old or older—was 108 in 1989 compared with 98 a year earlier. The previous record of 106 was set in 1986. This high rate is consistent with the large number of ewe lambs entering the 1-year-old and older category during 1989. Ewe lambs are not counted as part of the stock sheep inventory used to calculate the lambing rate, but their lambs are included in the lamb crop.

This increase in sheep and lamb inventory implies a substantial corresponding rise in lamb and mutton production in 1990. Production for the year is expected to increase about 4 percent to 355 million pounds. First-quarter production should equal about 95 million pounds, up roughly 9 percent from a year earlier. Preliminary weekly slaughter for January indicates that slaughter was up 10 percent from a year ago.

Prices for slaughter lambs at San Angelo, Texas averaged in the low $50's for January, as large slaughter numbers and heavy weights led to discounts. First-quarter slaughter lamb prices at San Angelo are expected to average in the low to mid-$60's, with the price strength coming in late March for the religious holidays of mid-April.

Second-quarter lamb and mutton production is expected to rise about 3 percent over the same period of 1989 to around 82 million pounds. Slaughter lamb prices for the second quarter should average in the mid-$70's as slaughter drops off seasonally. Third- and fourth-quarter production should be up about 4 and 1 percent, respectively, from a year earlier. Prices for slaughter lambs at San Angelo are expected

to average in the low $60's during the second half of the year.

Hogs

The hog market will likely be strong this spring and summer, supported by reduced pork supplies. Hog prices will probably reach their highest point since 1987, and retail pork prices could set new records. However, the market's strength may dissipate in the fall. Favorable net returns could encourage hog producers to expand breeding herds, boosting hog slaughter in 1991.

The supply of pork available for domestic consumption (total supply less exports) likely will stay below 1989 levels until the fall. Commercial pork production may be down substantially in the spring, and modestly lower in the summer. Through the first half of the year, pork imports may decline relative to a year earlier, while exports increase. Stocks of pork in cold storage are also considerably smaller than last year's sizable reserve. On a per capita basis, first-quarter domestic pork supplies total about 5 percent less than a year ago. Supplies could drop 9-10 percent in the second quarter and 4-5 percent in the summer. In the fall, supplies may increase.

Hog prices typically decline in early spring and increase in late spring; but this year, prices may remain relatively flat until the seasonal rise begins. Barrows and gilts traded mostly in the upper $40's per cwt at the seven markets early in the year, and spring lows may hold in the mid- to high $40's. By the end of the second quarter, prices could reach the mid- to high $50's, exceeding the peaks of 1988 and 1989.

Table 19--Commercial hog slaughter 1/ and production

Year	Barrows & gilts	Sows	Boars	Total	Dressed wt.	Comm'l-prod.
	------- 1,000 hd.	-------			lb.	Mil lb.
1986						
I	19,272	920	187	20,379	175	3,570
II	19,224	896	196	20,316	176	3,568
III	17,365	999	210	18,573	174	3,237
IV	19,223	927	179	20,330	178	3,623
Year	75,084	3,742	772	79,598	176	13,998
1987						
I	19,008	762	170	19,940	178	3,540
II	17,877	846	188	18,911	176	3,327
III	18,201	1,009	186	19,396	174	3,384
IV	21,776	888	170	22,834	178	4,061
Year	76,862	3,505	714	81,081	177	14,312
1988						
I	20,281	890	189	21,360	177	3,790
II	19,736	941	200	20,877	179	3,727
III	19,968	1,182	228	21,378	177	3,775
IV	22,932	1,054	194	24,180	179	4,331
Year	82,916	4,068	814	87,795	178	15,623
1989						
I	20,748	943	195	21,886	178	3,887
II	20,682	1,037	220	21,939	179	3,928
III	20,175	1,178	209	21,562	176	3,789
IV	22,052	1,068	186	23,306	178	4,155
Year	83,657	4,226	810	88,693	178	15,759

1/ Classes estimated.

Table 20--Federally inspected hog slaughter

Week ended	1987	1988	1989	1990
		Thousands		
Jan.				
6	1,683	1,726	1,416	1,337
13	1,659	1,766	1,721	1,763
20	1,527	1,605	1,681	1,674
27	1,500	1,543	1,644	1,684
Feb.				
3	1,455	1,535	1,631	1,647
10	1,502	1,545	1,656	
17	1,395	1,542	1,675	
24	1,533	1,595	1,665	
Mar.				
3	1,556	1,610	1,619	
10	1,578	1,674	1,716	
17	1,574	1,639	1,702	
24	1,504	1,631	1,601	
31	1,529	1,599	1,648	
Apr.				
7	1,553	1,573	1,761	
14	1,468	1,655	1,767	
21	1,393	1,660	1,813	
28	1,453	1,695	1,764	
May				
5	1,475	1,654	1,732	
12	1,440	1,634	1,658	
19	1,448	1,577	1,629	
26	1,232	1,533	1,618	
June				
2	1,385	1,323	1,343	
9	1,372	1,489	1,577	
16	1,341	1,513	1,589	
23	1,356	1,503	1,533	
30	1,193	1,537	1,500	
July				
7	1,360	1,330	1,233	
14	1,345	1,537	1,558	
21	1,354	1,542	1,518	
28	1,334	1,456	1,501	
Aug.				
4	1,372	1,528	1,543	
11	1,445	1,571	1,612	
18	1,404	1,513	1,610	
25	1,475	1,563	1,610	
Sept.				
1	1,548	1,607	1,713	
8	1,363	1,517	1,545	
15	1,671	1,807	1,888	
22	1,621	1,868	1,852	
29	1,658	1,803	1,785	
Oct.				
6	1,640	1,830	1,810	
13	1,720	1,838	1,809	
20	1,664	1,845	1,797	
27	1,763	1,895	1,739	
Nov.				
3	1,792	1,908	1,812	
10	1,778	1,827	1,791	
17	1,772	1,920	1,901	
24	1,463	1,562	1,564	
Dec.				
1	1,845	1,956	1,908	
8	1,879	1,887	1,832	
15	1,729	1,800	1,716	
22	1,150	1,668	1,523	
29	1,458	1,420	1,443	

1/ Corresponding dates to 1990: 1987, Jan. 10; 1988, Jan. 9; 1989, Jan. 7.

Higher wholesale pork prices likely will push retail prices upward as well. Retail prices averaged $1.95 per pound in January, only 2 cents below the record established in 1987. That record may be broken by midyear.

Stable feed costs and higher hog prices will increase net returns to producers. Returns have been trending upward since last spring, and the heightened profitablilty likely will encourage expansion of breeding herds.

Table 21--Pork: Retail, wholesale, and farm values, spreads, and farmers' share

Year	Retail price 1/	Wholesale value 2/	Gross farm value 3/	By-product allowance 4/	Net farm value 5/	Farm retail spread: Total	Farm retail spread: Wholesale-retail	Farm retail spread: Farm-wholesale	Farmers' share 6/
	Cents per pound								Percent
1985	162.0	101.1	76.2	4.8	71.4	90.6	60.9	29.7	44
1986	178.4	110.9	87.3	4.9	82.4	96.0	67.5	28.5	46
1987	188.4	113.0	87.9	5.2	82.7	105.7	75.4	30.3	44
1988	183.4	101.0	73.8	4.6	69.4	114.0	82.4	31.6	38
I	183.9	104.3	76.4	4.6	71.8	112.1	79.6	32.5	39
II	184.8	105.1	78.0	4.6	73.4	111.4	79.7	31.7	40
III	185.9	99.5	75.0	4.6	70.4	115.5	86.4	29.1	38
IV	179.0	95.3	66.2	4.0	62.2	116.8	83.7	33.1	35
1989	182.9	99.2	75.0	4.6	70.4	112.5	83.7	28.8	38
I	180.0	92.9	69.4	4.3	65.1	114.9	87.1	27.8	36
II	178.6	94.6	71.5	4.4	67.1	111.5	84.0	27.5	38
III	183.9	100.8	78.2	4.8	73.4	110.5	83.1	27.4	40
IV	188.9	108.4	80.8	4.7	76.1	112.8	80.5	32.3	40
1990									
Jan.	195.1	104.8	81.5	4.9	76.6	118.5	90.3	28.2	39

1/ Estimated weighted-average of BLS prices of retail cuts from pork carcass. 2/ Value of wholesale quantity equivalent to 1 lb of retail cuts. A wholesale-carcass equivalent of 1.06 is used. 3/ Market values to producer for 1.7 lb of live animal, equivalent to 1 lb of retail cuts. 4/ Portion of gross farm value attributable to edible and inedible by-products. 5/ Gross farm value minus by-product allowance. 6/ Percent net farm value is of retail price.

Table 22--Farrow-to-finish hog production costs and returns, 1,600 head annual sales, North Central Region 1/

Item	1989 Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1990 Jan
	Dollars per cwt										
Cash receipts: 2/											
Market hogs (94.25 lbs)	37.53	34.73	40.28	43.82	44.81	44.49	41.67	44.57	43.12	46.41	44.37
Cull sows (5.75 lbs)	1.94	1.80	1.90	1.94	1.95	2.02	2.09	2.27	2.12	2.22	2.33
Total	39.47	36.53	42.18	45.76	46.76	46.51	43.76	46.84	45.24	48.63	46.70
Cash expenses											
Feed--											
Corn (345.6 lbs)	14.44	15.27	16.20	15.97	15.96	15.60	15.72	15.47	15.36	14.49	14.40
Soybean meal (70.6 lbs)	11.67	11.67	11.76	11.76	11.76	11.01	11.01	11.01	10.80	10.80	10.80
Mixing concentrates (14.3 lbs)	2.89	2.89	2.89	2.89	2.89	2.99	2.99	2.99	2.99	2.99	2.99
Total feed	29.00	29.83	30.85	30.62	30.61	29.60	29.72	29.47	29.15	28.28	28.19
Other--	0.48	0.48	0.48	0.48	0.48	0.49	0.49	0.49	0.49	0.49	0.49
Veterinary and medicine 3/	0.76	0.76	0.76	0.76	0.76	0.78	0.78	0.78	0.78	0.78	0.78
Fuel, lube, and electricity	1.47	1.47	1.47	1.47	1.47	1.56	1.56	1.56	1.54	1.54	1.54
Machinery and building repairs	2.46	2.46	2.46	2.46	2.51	2.51	2.51	2.52	2.52	2.52	2.55
Hired labor 4/	1.38	1.38	1.38	1.38	1.48	1.48	1.48	1.48	1.48	1.48	1.53
Miscellaneous	0.67	0.67	0.67	0.67	0.67	0.69	0.69	0.69	0.69	0.69	0.69
Total variable expenses	35.74	36.57	37.59	37.36	37.50	36.62	36.74	36.50	36.16	35.29	35.28
General farm overhead	1.49	1.38	1.60	1.73	1.77	1.82	1.71	1.83	1.77	1.90	1.83
Taxes and insurance	0.70	0.70	0.70	0.70	0.70	0.74	0.74	0.74	0.70	0.70	0.70
Interest	3.42	3.17	3.66	3.97	4.05	3.80	3.58	3.83	3.70	3.97	3.82
Total fixed expenses	5.61	5.25	5.96	6.40	6.52	6.36	6.03	6.40	6.17	6.57	6.35
Total cash expenses 5/	41.35	41.82	43.55	43.76	44.02	42.98	42.77	42.90	42.33	41.86	41.63
Receipts less cash expenses	-1.88	-5.29	-1.37	2.00	2.74	3.53	0.99	3.94	2.91	6.77	5.07
Capital replacement	5.83	5.83	5.83	5.83	5.83	5.95	5.95	5.95	6.03	6.03	6.03
Receipts less cash expenses and replacement	-7.71	-11.12	-7.20	-3.83	-3.09	-2.42	-4.96	-2.01	-3.12	0.74	-0.96

1/The feed rations and expense items do not necessarily coincide with the experience of the individual hog operations and are an average of a group of operators. For individual use, adjust expenses and prices for management, production levels, and locality of operation. 2/ Based on 94.25 lb of barrows and gilts liveweight and 5.75 lb of sows per cwt sold. 3/ Includes costs of feed medication, that is usually included as part of the feed cost. 4/ Based on .204 hours per cwt of liveweight hog marketed. 5/ Does not include a charge for family or operator labor (.732 hours)

This potential expansion will influence fourth-quarter pork supplies and annual pork production more than any other factor. Although the incentives for expansion exist, it remains to be seen how quickly producers respond to them. To increase fourth-quarter pork production, producers must have expanded breeding herds this winter. The lag between breeding herd expansion and higher hog slaughter is usually 10-11 months.

On December 1, 1989, producers reported intentions to have 6 percent fewer sows farrow during March-May than a year earlier. The March-May pig crop will supply the bulk of fourth-quarter slaughter. In relation to the December 1 breeding herd, March-May farrowing intentions could be considered normal, but are less than a year ago. However, actual farrowings frequently exceed initial intentions when net returns are increasing. Thus, farrowing intentions may have risen since December 1. If the proportion of March-May farrowings to the December 1 breeding herd matches last year's level, spring farrowings will be down only 1 percent.

If the spring pig crop is only 1 percent smaller than a year earlier, fourth-quarter pork production likely will outpace that of a year earlier. In 1989, fourth-quarter hog slaughter was unusually low in relation to the spring pig crop, and hogs were marketed at relatively light weights. If more typical slaughter relationships and carcass weights prevail in 1990, a 1-percent decline in the spring pig crop could result in a 3-percent increase in fourth-quarter pork production.

Thus, fourth-quarter pork supplies could rise above year-earlier levels, pulling hog prices down. The projected gain in fourth-quarter production is based on the assumption that producers have expanded breeding herds slightly this winter. If producers have not responded so quickly to higher returns, production will not begin to climb until 1991.

Pork Trade

1989 Imports Down

Total U.S. pork imports for 1989 equaled 896 million pounds, down 21 percent from 1988 and the lowest level since 1983. Imports are expected to continue declining through the first quarter of 1990. However, higher U.S. pork prices and increased Danish production in the second half of the year could raise imports to 940 million pounds.

In the last half of December and throughout January, Canadian producers faced a substantial drop in hog prices. As a result, Canadian exports of pork to the United States declined and live animal exports increased. Although prices strengthened in February, Agriculture Canada is forcasting a 3-percent drop in 1990 production.

Table 23--U.S. pork trade, carcass weight 1/

Country or area	1988	1989	1989 / 1988
	Thousand head		Percent
Imports			
Canada	508.8	453.1	-10.9
Denmark	326.5	198.4	-39.2
Poland	128.6	112.8	-12.3
Hungary	44.2	26.2	-40.8
Other	129.1	105.1	-18.6
Total	1,137.2	895.7	-21.2
Exports			
Japan	121.2	148.9	22.9
Canada	8.8	13.4	52.0
Mexico	34.9	63.2	81.0
Caribbean	10.8	15.2	41.0
Other	19.5	26.9	37.9
Total	195.2	267.6	37.1

1/ Data may not add due to rounding. Percent change calculated from unrounded data.

Table 24--U.S. live hogs trade 1/

Country or area	1988	1989	1989 / 1988
	1,000 head		Percent change
Imports			
Mexico	.6	0	----
Canada			
Total	835.1	1,073.1	28.5
Under 110 lbs	---	169.4	----
Total	835.9	1,073.6	28.4
Exports			
Venezuela	2.5	3.1	23.3
Mexico	84.4	78.1	-7.5
Other	4.3	12.1	181.2
Total	91.3	93.3	2.2

1/ Data may not add due to rounding. Percent change calculated from unrounded data.

Although higher European Community (EC) prices had prompted Danish producers to expand their herds, hog prices declined sharply in December and could reduce pork production growth. However, the EC has increased export restitutions, and this could help support internal prices and encourage higher Danish exports.

Imports of Canadian Hogs Rose in 1989, But Should Fall in 1990

Imports of Canadian hogs equaled about 1.1 million head in 1989, up 29 percent from 1988. Of these, almost 16 percent were classified as hogs less than 50 kilograms (110 pounds).

According to Agriculture Canada estimates, exports of live hogs to the United States were over 97,000 head in January, up 16 percent from a year earlier. Continued growth of hog imports from Canada will depend upon hog availability, Canadian prices relative to those in the United States, and

any changes in either countervailing duty. If lower marketings support Canadian prices, live hog imports from Canada for the year could decline to about 750,000 head.

Pork Exports Substantially Higher in 1989

Pork exports reached 268 million pounds in 1989. This figure was 37 percent above 1988 and represents double-digit growth to all major markets. Strong export demand is expected to continue into 1990, but competition in the Japanese market and the possibility of increased Mexican production in the latter half of the year could hold U.S. exports to about 255 million pounds.

Exports to Japan for 1989 were about 149 million pounds, 23 percent above last year; exports to Mexico were 63 million pounds, but have weakened in the last several months. Japanese import growth has been exceptionally strong and could continue through 1990. However, even though little growth is expected in Taiwan's exports to Japan, higher U.S. prices and increased Danish restitutions on exports to Japan could limit U.S. export growth.

Poultry and Eggs

Broilers

Past Provides Strong Base for Growth

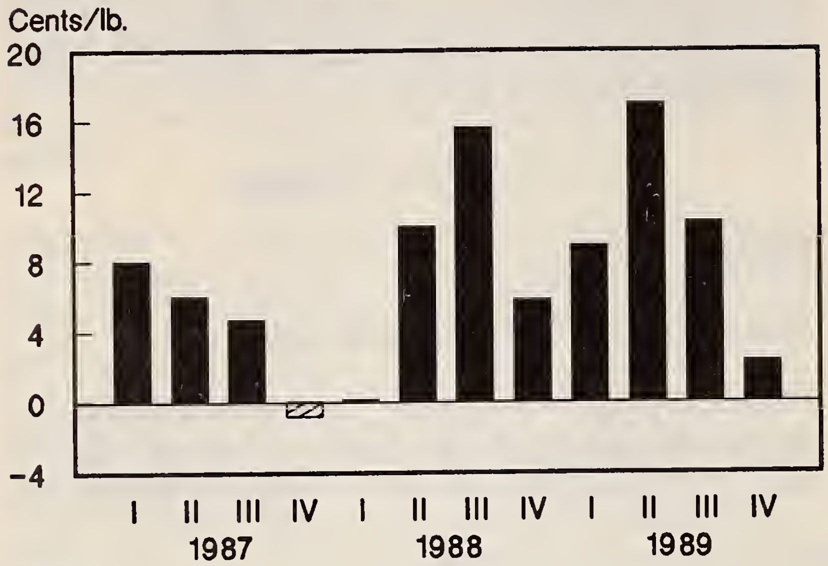
Net returns to broiler production have been very favorable for the past 3 years (with the exception of late 1987 and early 1988), and provide the industry with a strong financial

Table 25--Poultry and eggs estimated costs and returns, 1988-89 1/

Year	Production costs		Wholesale		Net returns
	Feed	Total	Total costs 2/	Price 3/	
	Market eggs (cents/doz.)				
1988:					
I	26.1	44.3	64.8	57.1	-7.8
II	27.1	45.3	65.8	54.6	-11.2
III	34.1	52.3	72.8	73.6	0.7
IV	33.5	51.7	72.2	70.4	-1.8
Year 4/	30.2	48.4	68.9	63.9	-5.0
1989:					
I 5/	32.8	51.0	71.5	82.8	11.3
II	32.2	50.4	70.9	76.1	5.2
III	31.0	49.2	69.7	85.2	15.5
IV	28.8	47.0	67.5	96.1	28.6
Year 4/	31.2	49.4	69.9	85.1	15.2
	Broilers (cents/lb.)				
1988:					
I	15.4	23.4	45.6	45.7	0.1
II	15.3	23.3	45.5	55.7	10.2
III	19.0	27.0	50.4	66.1	15.6
IV	19.7	27.7	51.4	57.2	5.8
Year 4/	17.4	25.4	48.2	56.2	8.0
1989:					
I 5/	19.1	27.1	50.6	59.4	8.9
II	18.6	26.6	49.9	67.1	17.4
III	18.2	26.2	49.4	59.7	10.2
IV	16.8	24.8	47.5	49.8	2.3
Year 4/	18.2	26.2	49.4	59.0	9.7
	Turkeys (cents/lb.)				
1988:					
I	21.9	35.6	60.8	47.6	-13.2
II	22.0	35.7	60.9	51.4	-9.5
III	25.4	39.1	65.2	72.5	7.3
IV	28.6	42.3	69.2	73.0	3.8
Year 4/	24.7	38.2	64.3	61.8	-2.5
1989:					
I 5/	27.9	41.6	68.3	61.6	-6.7
II	27.5	41.2	67.8	71.3	3.5
III	26.4	40.1	66.4	64.5	-1.9
IV	25.4	39.1	65.2	66.0	0.7
Year 4/	26.7	40.4	66.8	66.0	-0.8

1/ Costs and prices are weighted by monthly production.
2/ Based on farm cost converted to wholesale market value.
3/ Wholesale prices used are the 12-metro area egg price, 12-city weighted average broiler price, and a weighted average of 8-16 lb. young hens and 14-22 lb. toms in Central, Western, and Eastern Regions. 4/ Weighted average.

Figure 5
Broiler Industry Net Returns



Wholesale.

base for future expansion. Average net returns were 8 cents per pound in 1988 and 10 cents in 1989. Average net returns in 1989 appeared close to the 1986 record of 13 cents a pound, although returns fell in the fourth quarter when large supplies of broiler and turkey meat weakened prices. However, real returns did not really reflect near-record net returns, and likely will not stimulate production as much as in 1986. This year's broiler production is expected to increase at a lower rate than in 1987, when it rose about 9 percent.

In 1990, anticipated declines in feed prices will partially offset lower broiler prices. Positive returns are expected for the first quarter but lower than a year ago. The cost of producing broilers during the first 2 months of 1990 fell about 8.5 percent from a year earlier, and wholesale prices through February dropped about 9 percent. Producers' returns are expected to improve in the second and third quarters due to projected lower feed costs and higher broiler

Table 26--Broiler chicks hatched and pullet chicks placed in hatchery supply flocks, 1987-89

Month	Broiler-type chicks			Pullet chicks placed in broiler hatchery supply flocks: Monthly placements			Pullet chicks placed in broiler hatchery supply flocks: Cumulative placements 7-14 months earlier			
	1987	1988	1989	1987	1988	1989	1987	1988	1989	1990
	Thousands									
January	439,442	468,333	481,284	4,077	3,389	3,820	29,039	33,028	31,691	32,889
February	405,252	432,813	442,816	3,699	4,038	3,963	29,427	33,254	31,539	33,243
March	456,081	483,353	502,466	4,111	4,538	4,396	29,523	32,805	31,470	33,619
April	455,679	464,386	493,503	4,713	3,831	4,195	29,722	32,185	32,043	34,144
May	473,827	487,027	522,896	4,055	4,197	4,439	30,148	32,612	32,136	34,535
June	461,421	473,782	509,837	4,181	3,818	4,330	30,242	32,264	31,194	34,079
July	463,321	473,394	511,774	3,995	3,611	3,950	30,603	31,668	31,513	33,976
August	455,676	479,734	509,291	3,974	4,048	4,526	30,742	31,002	31,136	33,775
September	433,769	455,183	484,030	3,457	3,962	4,345	30,926	30,859	31,281	
October	441,893	456,819	483,728	4,126	4,131	4,354	31,365	31,402	32,066	
November	423,147	437,967	469,318	3,763	3,596	3,940	32,232	31,259	32,213	
December	469,720	488,248	521,413	4,117	4,150	4,092	32,693	31,999	32,690	

Table 27--Broilers: Eggs set and chicks placed weekly in 15 commercial States, 1989-90 1/

Period 2/	Eggs set			Chicks placed		
Month and day 2/	1989	1990	Change from previous year	1989	1990	Change from previous year
	- - - Thousands - - -		Percent	- - - Thousands - - -		Percent
January:						
6	124,211	129,684	4.4	96,530	105,543	9.3
13	120,451	131,418	9.1	98,861	104,388	5.6
20	123,304	130,653	6.0	99,110	104,199	5.1
27	125,919	130,967	4.0	98,548	104,358	5.9
February:						
3	126,465	129,892	2.7	95,840	105,722	10.3
10	126,468	131,061	3.6	97,477	105,123	7.8
17	127,051	134,650	6.0	99,587	104,723	5.2
24	127,505			101,011		
March:						
3	127,649			100,500		
10	128,064			100,464		
17	128,159			102,085		
24	127,530			102,691		

1/ 15 States: Ala., Ark., Calif., Del., Fla., Ga., Md., Miss., N.C., Pa., S.C., Tenn., Tex., Va., and W. Va.
2/ Weeks in 1990 and corresponding weeks in 1989.

Table 28--Federally inspected young chicken slaughter, 1988-89

Year	Number	Average weight	Live-weight	Certi-fied RTC
	Million	Pounds	- Million pounds -	
1988:				
I	1,267	4.35	5,511	3,996
II	1,303	4.30	5,611	4,079
III	1,317	4.20	5,530	4,035
IV	1,272	4.36	5,555	4,015
Year	5,159	4.30	22,207	16,124
1989:				
I	1,310	4.35	5,698	4,129
II	1,394	4.33	6,032	4,389
III	1,412	4.29	6,052	4,395
IV	1,383	4.41	6,101	4,420
Year	5,499	4.34	23,883	17,334

prices. Industry expectations of a profitable 1990 will likely encourage heightened production again next year.

Increased Broiler Production Expected for 1990

Broiler production in 1990 is estimated to approach 18.5 billion pounds, up 7 percent from 1989. Year-over-year increases of 7-8 percent are expected for the first three quarters, with possible slower growth likely in the fourth quarter. Anticipated first-quarter growth is supported by the number of chicks hatched in November through January (up 6-7 percent from 1988), and by average weight gains of about 1 percent.

1990 Broiler Prices Lower

The 12-city wholesale broiler price in 1990 will likely average in the upper 40- to the mid-50-cent-per-pound range, compared with 59 cents a year ago. First-quarter wholesale prices will likely average from 49 to 53 cents per pound, compared with the year-earlier average of 59.4 cents. Increased supplies of poultry and other meat in late 1989 and early 1990 may have surpassed demand increases, pulling wholesale prices below 1989 levels. Retail featuring that focused on turkeys, beef, and pork in the last quarter of 1989 may have also lowered broiler prices. However, higher beef and pork prices in January led to extensive featuring of broilers in recent weeks, which may have helped strengthen broiler prices.

Wholesale broiler prices are expected to strengthen through the third quarter, reflecting seasonal factors, reduced pork supplies, and continued high beef prices. Prices will likely average 50 to 56 cents per pound in the second quarter and 52 to 58 cents per pound in the third. The anticipated increase in broiler exports will likely add support to prices, particularly for legs and leg quarters.

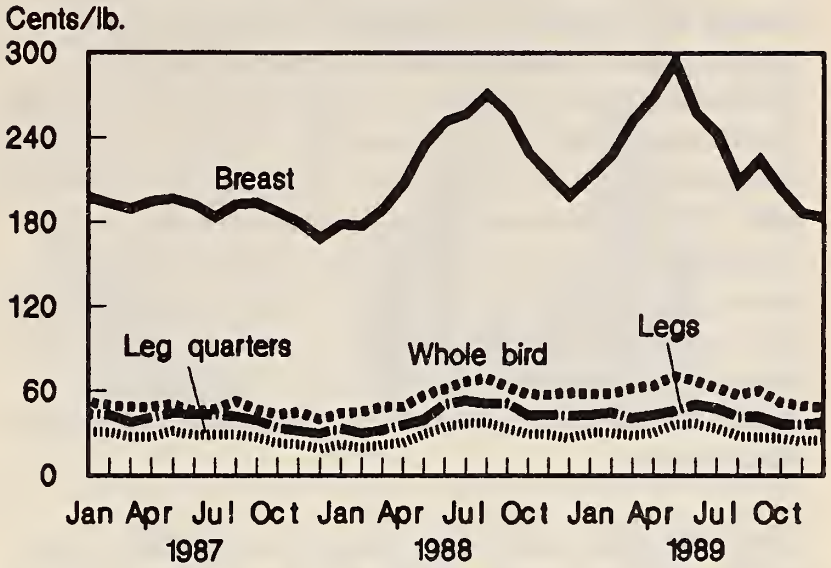
The recent sharp increases in demand for dark meat parts on the world market may alter the seasonal behavior of wholesale prices for whole birds and parts, which have been closely related in the past 3 years. However, the marked difference in the price of chicken breasts compared with whole

Table 29--Young chicken prices and price spreads, 1987-90

Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.
						Cents/lb.							
Farm price 1/:													
1987	31.1	30.0	29.0	29.2	29.9	27.6	27.6	31.7	27.8	25.1	26.3	24.5	28.3
1988	26.8	25.9	27.4	28.3	33.7	37.4	41.5	42.3	39.1	35.7	34.8	35.5	34.0
1989	35.3	35.2	38.7	38.9	45.2	42.6	39.1	36.1	37.1	30.6	29.8	28.6	36.4
1990	30.7												
Wholesale RTC 12-city avg. 2/:													
1987	51.8	49.8	48.5	48.6	50.5	45.5	47.0	52.6	46.4	43.2	44.6	39.8	47.4
1988	43.9	44.9	48.4	48.7	56.6	61.5	66.5	68.9	62.8	57.7	57.1	58.8	56.3
1989	58.0	58.0	62.1	63.5	70.4	67.4	62.0	57.3	59.9	51.7	49.2	48.6	59.0
1990	51.7												
U.S. avg. retail price:													
1987	82.1	83.2	80.4	79.2	78.2	77.1	75.5	78.5	79.3	79.1	75.6	73.6	78.5
1988	74.0	74.5	75.3	76.0	79.6	86.8	93.7	96.1	97.5	93.2	89.2	88.5	85.4
1989	90.5	89.9	91.3	93.2	96.1	98.2	96.4	95.4	94.2	91.0	87.9	88.3	92.7
1990	88.2												
Price spreads retail-to-cons.:													
1987	24.3	26.8	25.2	25.3	21.2	18.7	21.2	20.2	33.1	30.2	25.2	26.1	24.8
1988	23.7	24.4	21.6	20.5	16.5	18.0	22.8	21.9	29.9	28.8	26.7	24.0	23.2
1989	27.3	28.6	24.9	29.4	20.2	25.1	27.7	30.9	29.4	33.1	32.0	33.6	28.5
1990	30.5												
						1982-84 = 100							
Retail pr. index wh. chickens:													
1987	119.5	118.7	115.2	113.1	112.9	111.6	109.9	113.9	114.6	113.0	109.2	107.7	113.3
1988	107.9	109.5	110.3	111.6	117.4	125.9	137.4	140.1	142.0	136.0	131.7	131.0	125.1
1989	133.7	133.2	135.6	138.0	142.9	144.7	141.7	140.8	139.1	134.9	130.4	130.4	137.1
1990	131.5												

1/ Liveweight. 2/ 12-city composite weighted average.

Figure 6
Broiler Prices: Whole Bird and Parts



12-city weighted average and northeast parts prices.

birds and dark meat parts will likely persist, reflecting a continuing preference by American consumers for white poultry meat and the influence of new product introduction and marketing of chicken entrees by restaurants, especially fast-food chains.

In 1990, the pattern for retail prices will likely resemble that of wholesale prices. Retail prices for whole fryers will likely average 80-86 cents per pound, down from 92.7 cents in 1989. First-quarter average retail prices for whole birds will likely range from 82 to 86 cents per pound, compared with 90.6 cents a year earlier.

Consumption at Record Level

Per capita consumption of broilers will likely reach almost 70 pounds in 1990, up nearly 6 percent from 1989. Expectations of higher per capita disposable income, lower broiler prices relative to other meats, and consumer preferences for easy-to-prepare white meats are major factors behind the expected increased consumption.

Turkeys

Turkeys Raised Increased 7 Percent in 1989

USDA revisions in the number of turkeys raised in 1989 placed the number at 260.3 million birds, up 7 percent from 1988. North Carolina, Minnesota, and California, the leading States, each had gains above the average and produced about 48 percent of the total raised, up from 47 percent in 1988. Above-average increases were also experienced in Arkansas, Michigan, Ohio, Illinois, West Virginia, and Oregon. Below-average growth occurred in Virginia, Missouri, and Pennsylvania, while Indiana had no change.

Production Increases To Continue in 1990

Turkey production will likely expand 5-6 percent during 1990, compared with nearly 7 percent growth in 1989. Expectations for continued lackluster net returns prompted the forecast of still strong but lesser growth than suggested by the January report of growers' intentions to raise 9 percent more turkeys in 1990. The anticipation of lower feed prices may have encouraged growers to consider higher production. Poult placements last fall rose an average 19 percent; however, in December and January they were up 6.4 and 6.7 percent respectively compared with a year earlier, the smallest increases since last April. First-quarter production is expected to be up about 18 percent from a year earlier, followed by an 8-9 percent rise in the second quarter. This contrasts with last year's first half, when production remained essentially unchanged. Production in the second half of 1990 is expected to be about the same as a year earlier.

Table 30--Turkey hatchery operations, 1987-90 1/

	Total turkeys placed 2/			Eggs in incubators first of month, changes from previous year		
	1987-88	1988-89 3/	1989-90	1987-88	1988-89	1989-1990
	- - - Thousands - - -			- - - Percent - - -		
Sept.	15,024	15,725	19,885	16	7	27
Oct.	16,743	16,821	20,135	18	5	26
Nov.	17,714	18,413	20,700	21	4	14
Dec.	19,956	20,444	21,752	15	6	13
Jan.	22,315	23,149	27,702	9	4	8
Feb.	23,100	23,675		8	6	6
Mar.	25,101	26,892		3	5	
Apr.	24,718	26,366		-1	6	
May	25,559	28,647		-5	9	
June	26,075	29,098		-3	13	
July	23,677	26,510		-5	15	
Aug.	19,458	23,003		-5	21	

1/ Breakdown by breed not shown to avoid disclosing individual operations. 2/ Excludes exported poults. 3/ Includes revised calendar year 1988 numbers.

Table 31--Federally inspected turkey slaughter, 1988-89

Year	Number	Average weight	Live-weight	Certi-fied RTC
	Million	Pounds	- Million pounds -	
1988				
I	50.3	21.0	1,054.0	836.6
II	60.0	20.6	1,236.3	981.1
III	65.7	20.4	1,343.3	1,065.6
IV	61.4	21.4	1,314.2	1,040.1
Year	237.4	20.8	4,947.8	3,923.4
1989				
I	47.9	21.2	1,012.0	803.5
II	61.8	20.7	1,279.0	1,014.3
III	72.4	20.5	1,483.0	1,176.4
IV	69.5	21.5	1,491.0	1,179.4
Year	251.6	21.0	5,265.0	4,173.6

Table 32--Turkey prices and price spreads, 1987-90

Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Av.
							Cents/lb.						
Farm price 1/:													
1987	35.1	35.8	35.7	36.3	35.5	34.1	33.5	32.1	31.3	30.2	34.0	38.4	34.3
1988	32.3	29.7	28.4	28.4	29.8	32.1	40.4	42.0	45.4	48.4	47.9	38.3	37.3
1989	35.4	38.3	40.0	42.3	43.4	44.0	41.5	41.3	37.3	38.5	40.9	39.6	40.2
1990	35.9												
New York, hens, 8-16 lbs 2/:													
1987	55.3	58.5	60.3	58.3	55.3	55.7	56.3	56.1	56.1	54.7	60.7	66.5	57.8
1988	52.8	47.1	47.0	46.9	49.3	57.1	70.8	70.5	76.0	79.6	76.0	61.6	61.1
1989	59.0	62.2	65.7	68.3	72.1	73.0	66.4	62.6	57.9	67.8	72.5	72.7	66.7
1990	55.6												
4-region average retail price, wholebirds:													
1987	103.6	103.2	103.0	100.4	102.8	105.1	105.8	105.1	103.3	102.6	90.0	89.3	101.2
1988	93.1	92.9	91.0	89.4	92.9	92.9	96.0	99.5	100.6	104.0	99.2	97.1	95.7
1989	97.4	96.8	97.6	98.3	100.1	101.3	104.6	104.1	102.0	102.2	93.2	95.0	99.4
1990	98.9												
Price spreads, retail-to-consumer:													
1987	39.8	37.4	35.4	33.4	37.3	40.1	41.1	41.8	39.0	38.3	22.0	13.5	34.9
1988	29.8	35.0	33.4	33.0	35.1	24.6	23.7	21.0	17.3	16.5	14.7	26.7	25.9
1989	29.8	29.9	25.7	23.2	20.7	20.7	30.2	32.3	34.2	28.9	13.4	15.4	25.4
1990	33.7												
							1982-84 = 100						
Consumer pr. index 3/:													
1987	113.3	111.6	112.0	109.6	111.6	111.8	112.1	111.6	109.4	109.2	103.5	103.9	110.0
1988	107.7	107.2	107.2	107.5	108.3	109.3	109.8	112.4	114.2	115.5	113.1	113.3	110.5
1989	114.2	116.3	118.7	121.5	123.2	124.1	126.0	124.6	124.4	123.2	119.2	121.1	121.4
1990	123.9												

1/ Liveweight. 2/ Wholesale, ready-to-cook. 3/ Other poultry CPI.

Prices Lower

Increasing production has forced turkey prices below a year earlier. Near term, first-quarter Eastern region wholesale prices, at 51-55 cents per pound, are expected to remain below last year's 62.4 cents. Because of these low prices, retailer purchases in the first quarter have been stronger than usual. This may have implications for second-half prices. The current price forecast assumes much of these purchases are for late 1990 use. However, if such purchases are for current consumption, second-half prices could be higher than currently forecast. Prices in the second half are expected to average 60-66 cents per pound.

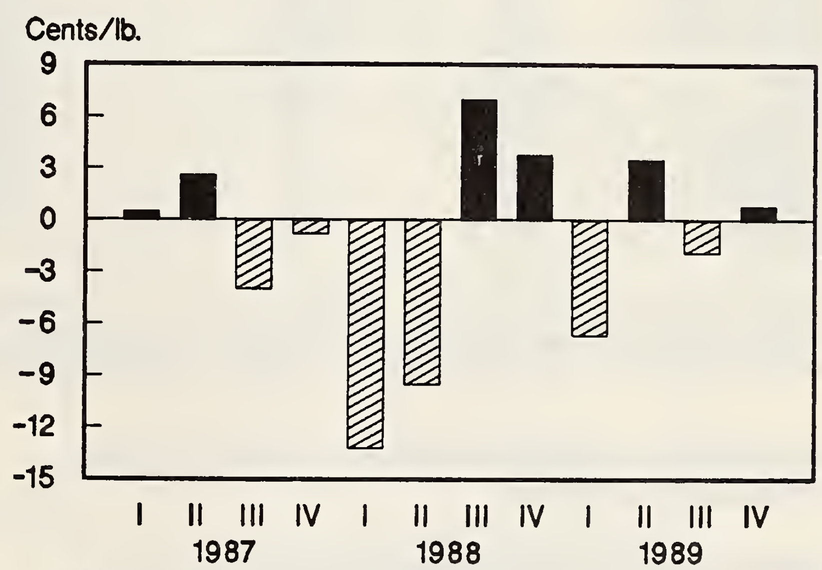
Retail featuring of whole turkeys and turkey cuts such as breasts has played a role in recent wholesale price gains. Featuring was facilitated by relatively high red meat retail prices. In addition, buying of low-priced turkey parts for export has helped to stabilize prices at the low end.

Retail prices are also expected to be 5-7 percent lower than a year earlier, thus encouraging continued growth in consumption. Per capita consumption is likely to increase to around 17.5 pounds in 1990 from 16.9 last year.

Producer Net Returns Drop

Estimated net returns were low but positive during the fourth quarter of 1989. However, net returns estimated for January and February are around a negative 9-10 cents per pound, despite lower feed costs. Thus, estimated net returns for the

Figure 7
Turkey Industry Net Returns



Wholesale.

first quarter of 1990 will be negative, and below a year earlier. Positive returns are expected during the second half as prices strengthen.

Eggs

Egg Production Down Sharply in 1989

Total egg production in 1989 declined over 3 percent from 1988 to around 5.6 billion dozen, reflecting adjustments to the record losses table egg producers experienced that year. Layer numbers were down 3 percent, and the annual average

Table 33-Layers and egg production: Number produced, averaged number of layers, and eggs per layer 1/

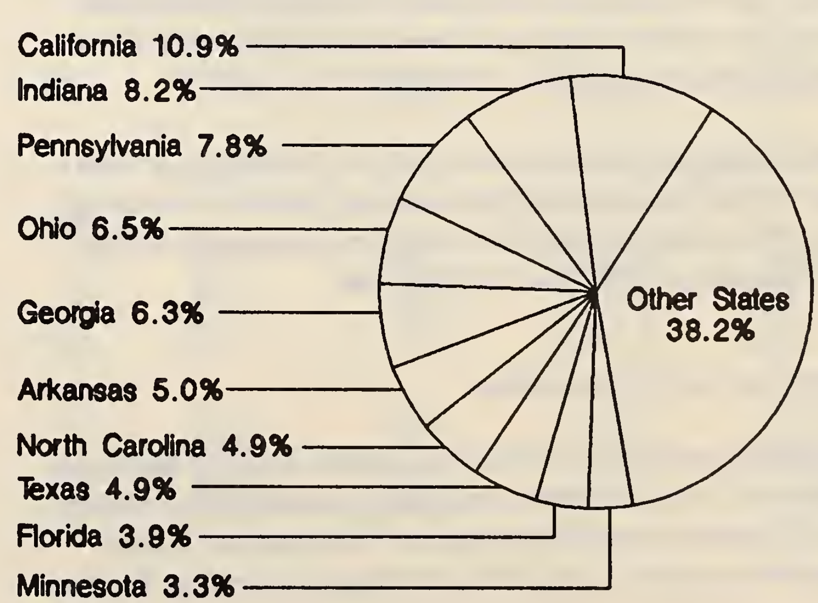
States	Number of eggs produced 1988	Number of eggs produced 1989	Annual average number of Layers 2/ 1988	Annual average number of Layers 2/ 1989	Eggs per Layer 2/ 1988	Eggs per Layer 2/ 1989
	Million eggs		Thousand		Number	
Alabama	2,596	2,184	11,002	9,458	236	231
Alaska	1	1	4	4	175	175
Arizona	86	79	324	306	265	258
Arkansas	3,784	3,352	15,778	14,455	240	232
California	7,718	7,317	31,467	30,073	245	243
Colorado	784	824	3,056	3,240	257	254
Connecticut	1,121	935	4,377	3,712	256	252
Delaware	146	147	677	640	216	230
Florida	2,758	2,602	11,121	10,662	248	244
Georgia	4,294	4,233	17,822	17,563	241	241
Hawaii	224	227	1,016	989	221	229
Idaho	217	217	921	864	236	251
Illinois	780	794	3,114	3,176	250	250
Indiana	5,644	5,529	21,435	21,165	263	261
Iowa	2,058	2,140	8,073	8,505	255	252
Kansas	417	387	1,617	1,549	258	250
Kentucky	457	407	1,845	1,689	248	241
Louisiana	311	299	1,401	1,366	222	219
Maine	1,300	1,138	4,880	4,303	266	264
Maryland	932	965	3,554	3,757	262	257
Massachusetts	262	238	973	893	269	267
Michigan	1,553	1,454	6,079	5,665	255	257
Minnesota	2,250	2,236	9,005	8,740	250	256
Mississippi	1,251	1,289	5,170	5,354	242	241
Missouri	1,256	1,485	6,145	6,180	248	240
Montana	194	180	773	703	251	256
Nebraska	902	1,037	3,672	4,091	246	253
Nevada	2	2	13	13	169	177
New Hampshire	51	53	202	193	252	275
New Jersey	486	437	1,794	1,687	271	259
New Mexico	287	294	1,141	1,145	252	257
New York	1,013	1,063	3,878	3,973	261	268
North Carolina	3,396	3,312	14,281	13,871	238	239
North Dakota	59	47	246	207	240	227
Ohio	4,477	4,353	17,129	16,777	261	259
Oklahoma	863	885	3,674	3,726	235	238
Oregon	617	678	2,351	2,538	262	267
Pennsylvania	5,317	5,232	19,813	19,535	268	268
Rhode Island	52	46	201	191	259	241
South Carolina	1,432	1,342	5,500	5,114	260	262
South Dakota	348	373	1,414	1,462	246	255
Tennessee	532	318	2,120	1,325	251	240
Texas	3,363	3,304	13,901	13,673	242	242
Utah	490	460	1,933	1,849	253	249
Vermont	54	36	207	150	261	240
Virginia	911	894	3,659	3,563	249	251
Washington	1,327	1,299	5,008	4,805	265	270
West Virginia	126	121	568	517	222	234
Wisconsin	881	852	3,448	3,326	256	256
Wyoming	4	2	19	13	189	177
Total U.S. 3/	69,655	67,100	277,781	268,744	251	250

1/Annual estimates cover the period December 1, previous year through November 30. 2/ Total egg production divided by average number of layers on hand. 3/ Sum of States may not add to U.S. total due to rounding.

production per hen decreased from 251 in 1988 to 250, likely reflecting an older flock.

California remained the top egg-producing State with almost 11 percent of the national production, followed by Indiana with around 8 percent. There was little change in the relative ranking of the top 10 egg producing States from 1988, except that Minnesota replaced Alabama as number 10. The share of production from the top 10 States has remained relatively stable for the past several years, around 62 percent of total production.

Figure 8
Egg Production by State, 1989



1990 Egg Production To Increase

Total egg production is expected to increase around 2 percent in 1990, following last year's 3.4-percent decrease. The sharp swing reflects adjustments in flock size as table egg

producers first reacted to the heavy losses in 1988 and then later began to expand in response to the record high net returns of 1989. The table-egg flock size on January 1, 1990, around 230.5 million hens, was 1 percent smaller than a year earlier and 7 percent smaller than on January 1, 1988. The total flock size, 270 million hens, was fractionally smaller than a year earlier, but the hatching-egg flock was 5 percent larger, reflecting the growth in broiler production.

Indicators of future flock size have been running above last year. Egg-type eggs in incubators on the first of each month for June 1989-January 1990 averaged almost 10 percent above a year earlier, and on January 1 were up 28 percent from 1989, after having been down 20 percent on January 1, 1989 from the year before. Egg-type chicks hatched surpassed year-earlier figures in April 1989, and continued to do so for the rest of the year.

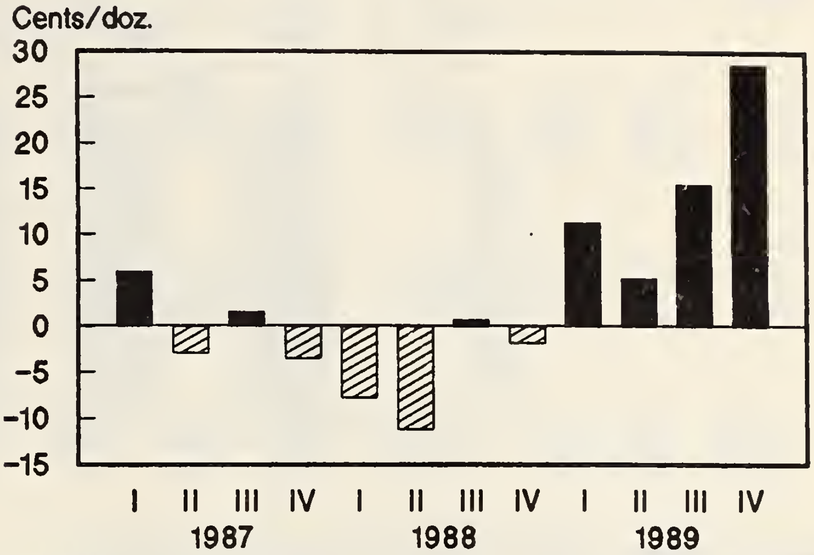
Table egg production is expected to increase just under 2 percent in 1990, and hatching egg production will likely climb nearly 4 percent. Total egg production in the first quarter will rise less than 1 percent; most of the gains will come in the second half of the year, when production is expected to increase around 3 percent.

Egg Prices To Remain Strong

New York wholesale large egg prices averaged 82 cents per dozen in 1989, compared with 62 cents in 1988. Net returns to egg producers set a record high in 1989 of around 15 cents per dozen, reflecting the exceptional strength in egg prices associated with reduced production.

Wholesale prices are expected to continue relatively strong through 1990, but below 1989 levels as additional production is marketed. First-quarter wholesale prices are expected to average around 85 cents per dozen, compared with 78

Figure 9
Egg Industry Net Returns



Wholesale.

Figure 10
Egg-type Chick Hatch

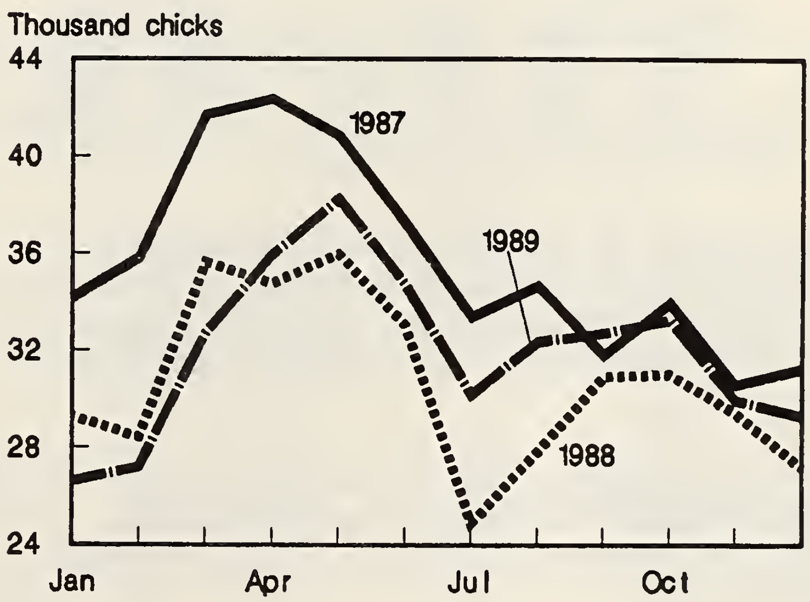


Table 34--Force moltings and light-type hen slaughter, 1988-90

Month	Force molted layers 1/ Being molted			Force molted layers 1/ Molt completed			Light-type hens slaughtered under Federal inspection (Number)		
	1988 2/	1989 2/	1990 3/	1988 2/	1989 2/	1990 3/	1987	1988	1989
	Percent						Thousands		
January	3.8	4.0	3.0	20.8	23.3	21.5	13,002	13,574	12,251
February	5.0	4.9	5.5	20.3	21.5	20.9	13,342	14,647	11,908
March	3.8	4.3		20.5	21.7		13,450	15,312	13,646
April	3.9	3.9		19.3	21.5		14,428	15,034	10,528
May	5.9	5.3		18.6	21.4		12,870	14,107	11,869
June	7.6	5.6		19.9	21.7		13,791	13,157	10,316
July	6.0	4.8		21.2	21.6		12,481	8,601	10,195
August	4.3	4.0		22.4	22.7		12,518	10,555	10,871
September	4.3	3.8		22.4	22.9		10,813	9,119	10,779
October	4.5	4.3		22.3	22.9		12,054	10,136	10,459
November	3.9	4.6		22.6	23.5		11,410	11,092	9,255
December	3.5	2.7		24.1	23.9		15,957	13,444	11,294

1/ Revisions include data from late reports or other corrections developed by the Food Safety and Inspection Service. 2/ Percent of hens and pullets of laying age in 15 selected States. 3/ Percent of hens and pullets of laying age in 20 selected states.

Table 35--Egg-type chick hatchery operations, 1987-1990

Month	Hatch			Eggs in incubators first of month, changes from previous year		
	1987	1988	1989	1988	1989	1990
	Thousands			Percent		
Jan.	34,156	29,274	26,614	-4	-20	28
Feb.	35,815	28,433	27,191	24	2	23
Mar.	41,708	35,615	32,723	-17	-15	
Apr.	42,356	34,749	35,942	-16	3	
May	40,858	35,984	38,254	-17	1	
June	37,256	33,049	34,707	-6	-2	
July	33,375	24,876	30,175	-24	17	
Aug.	34,667	27,838	32,373	-23	17	
Sept.	31,800	30,918	32,710	-15	3	
Oct.	33,959	31,007	33,269	-11	6	
Nov.	30,593	29,425	29,938	1	-4	
Dec.	31,242	27,181	29,317	-11	11	

Table 36--Layers on farms and eggs produced, 1988-89 1/

Quarters	Number of layers		Eggs per layer		Eggs produced	
	1988	1989 2/	1988	1989 2/	1988	1989 2/
	- Million -		- Number -		Million dozen	
I	286	272	62.2	61.4	1,483.2	1,394.4
II	278	268	63.5	63.4	1,471.3	1,417.1
III	271	266	62.9	62.8	1,423.1	1,393.2
IV	275	268	62.2	62.0	1,427.0	1,386.9
Annual	278	269	250.8	249.6	5,804.6	5,591.6

1/ Marketing year beginning December 1. 2/ Preliminary.

cents last year. The average expected for the year is in the low to mid-70-cent range, compared with 82 cents per dozen in 1989. Net returns are expected to stay positive through the first half of 1990, reflecting continued price strength and lower feed costs.

Average retail prices in 1989 rose to their highest level since early 1984, almost $1.00 per dozen, up from 79 cents in 1988. They are expected to average in the high 80-cent-per-dozen range.

Egg Consumption Expected To Stabilize

The decline in total egg production in 1989 and the general move toward cereal breakfasts, or no breakfasts at all, and consumers' health concerns about eggs, sharply reduced per capita consumption to 235.6 eggs in 1989, down from 245.5 eggs in 1988. In 1990, per capita consumption is forecast to remain stable at 236 eggs per person.

Table 37--Shell eggs broken and egg products produced under Federal inspection, 1988-89

Period	Shell eggs broken	Egg products produced 1/		
		Liquid 2/	Frozen	Dried
	Thou. doz.	Thou. lbs.	Thou. lbs.	Thou. lbs.
1988:				
January	74,629	24,055	26,050	8,973
February	75,240	26,412	26,412	8,649
March	81,978	27,153	28,412	10,238
April	78,725	26,516	28,209	9,487
May	88,485	29,635	33,072	10,226
June	93,003	30,076	37,251	9,034
July	80,170	25,572	31,347	7,903
August	90,303	30,412	31,675	9,178
September	79,125	27,888	31,565	7,327
October	79,071	27,803	30,198	7,589
November	80,261	28,622	31,507	8,455
December	75,407	26,566	34,113	8,198
Jan.-Dec.	976,397	330,710	369,811	105,257
1989:				
January	79,780	28,584	29,255	10,208
February	69,829	26,991	25,612	9,392
March	69,998	31,581	25,136	7,764
April	76,547	29,355	29,153	8,865
May	91,063	32,678	34,600	10,091
June	89,658	31,996	33,306	10,067
July	81,260	28,762	30,521	9,192
August	86,929	34,053	34,325	8,620
September	76,896	33,170	29,094	7,715
October	82,369	37,743	31,738	8,368
November	76,864	36,989	28,864	7,350
December	67,770	31,205	27,091	6,753
Jan-Dec.	948,963	383,107	358,695	104,385
Percent change from 1988	-2.8	+15.8	-3.0	-0.8

1/ Includes ingredients added. All expressed in liquid egg equivalent. 2/ Liquid egg products produced for immediate consumption.

Table 38--Egg prices and price spreads, 1987-90

Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.
							Cents/doz.						
Farm price 1/:													
1987	51.7	50.1	46.0	45.8	39.5	40.3	40.8	40.5	49.7	40.9	45.4	38.8	44.1
1988	48.8	46.4	49.5	45.0	44.0	46.3	58.3	58.1	63.5	58.7	59.5	59.7	53.2
1989	63.9	62.1	80.1	65.3	62.0	63.3	64.0	71.0	71.0	71.3	78.6	82.8	69.6
1990	83.8												
New York (cartoned) Grade A, large 2/:													
1987	67.1	65.2	62.0	62.4	55.6	58.7	59.1	63.2	68.3	60.2	60.5	56.9	61.6
1988	55.9	52.7	56.4	52.1	50.9	56.8	73.6	69.5	75.6	66.0	65.3	70.4	62.1
1989	72.0	71.0	92.2	76.6	73.7	75.2	76.5	84.2	83.8	84.8	93.4	99.6	82.0
1990	92.4												
4-Region average, Grade A, large retail price													
1987	86.2	82.3	80.0	78.6	76.3	71.1	76.3	73.0	83.7	77.8	80.5	73.1	78.3
1988	76.0	71.8	74.0	71.9	67.8	70.5	80.3	90.9	87.4	89.6	83.9	83.3	79.0
1989	94.1	89.0	103.1	99.7	95.6	93.7	96.1	98.3	103.8	102.3	108.0	113.7	99.8
1990	122.3												
Price spreads, retail-to-consumer:													
1987	17.4	14.5	16.5	15.3	20.8	12.7	16.4	15.7	13.6	18.4	18.4	15.4	16.3
1988	19.0	18.2	14.9	20.0	16.5	13.0	7.0	20.5	11.2	22.0	16.0	10.1	15.7
1989	18.2	18.6	10.2	23.1	21.2	17.2	18.3	12.1	16.7	16.0	12.3	134.9	18.5
1990	26.7												
							1982-84 = 100						
Consumer pr. index:													
1987	100.8	97.8	93.9	91.1	88.5	84.1	87.8	85.8	97.6	91.4	93.9	85.5	91.5
1988	90.1	85.5	87.9	85.0	81.8	83.6	95.1	104.2	103.1	105.5	101.2	99.6	93.6
1989	112.0	106.1	122.9	117.6	112.6	110.6	112.8	115.2	124.6	122.9	129.4		
1990	143.9												

1/ Market (table) eggs including eggs sold retail by the producer; data not available prior to 1982. 2/ Price to volume buyers.

Table 39--Egg supply and utilization (population includes military) 1/

Year	Production	Beginning stocks	Breaking egg use	Imports 2/	Total supply	Exports	Hatching egg use 3/	Ending stocks	Consumption Total	Consumption Per capita
						Million dozen				
Total eggs										
1987										
I	1,458.3	10.4	---	2.6	1,471.2	23.6	147.6	11.9	1,288.2	63.6
II	1,456.2	11.9	---	1.2	1,469.3	23.7	154.9	13.8	1,277.0	62.9
III	1,456.7	13.8	---	1.0	1,471.4	21.5	149.2	13.5	1,287.3	63.2
IV	1,497.1	13.5	---	0.8	1,511.4	42.4	147.4	14.4	1,307.1	64.0
Year	5,868.2	10.4	---	5.6	5,884.1	111.2	599.1	14.4	5,159.4	253.8
1988										
I	1,480.3	14.4	---	0.9	1,495.6	33.7	150.2	11.7	1,300.0	63.5
II	1,431.8	11.7	---	0.7	1,444.1	34.1	153.8	20.1	1,236.0	60.2
III	1,424.3	20.1	---	2.1	1,446.5	33.4	151.2	17.6	1,244.3	60.5
IV	1,447.2	17.6	---	1.6	1,466.3	40.6	150.6	15.2	1,260.0	61.1
Year	5,783.5	14.4	---	5.3	5,803.2	141.8	605.9	15.2	5,040.3	245.5
1989										
I	1,388.8	15.2	---	1.9	1,405.9	23.7	155.1	11.7	1,215.3	58.8
II	1,394.0	11.7	---	8.2	1,414.0	21.2	164.8	12.2	1,215.8	58.8
III	1,389.2	12.2	---	10.4	1,411.8	23.2	161.2	11.6	1,215.8	58.6
IV	1,413.7	11.6	---	8.0	1,433.3	27.0	160.5	11.0	1,234.8	59.4
Year 4/	5,585.8	15.2	---	28.5	5,629.5	95.1	641.6	11.0	4,881.8	235.6
Shell eggs										
1987										
I	1,458.3	0.7	225.3	1.9	1,235.5	7.1	147.6	1.0	1,080.0	53.3
II	1,456.2	1.0	237.0	0.1	1,220.3	8.9	154.9	1.0	1,055.5	52.0
III	1,456.7	1.0	242.8	0.1	1,214.9	8.3	149.2	1.0	1,056.5	51.9
IV	1,497.0	1.0	235.0	0.1	1,263.2	24.3	147.4	1.3	1,090.2	53.4
Year	5,868.2	0.7	940.1	2.3	4,931.1	48.6	599.1	1.3	4,282.1	210.6
1988										
I	1,480.3	1.3	231.8	0.1	1,249.9	16.0	150.2	1.0	1,082.6	52.9
II	1,431.8	1.0	260.2	0.1	1,172.7	12.0	153.8	0.9	1,005.9	49.1
III	1,424.2	0.9	249.6	1.1	1,176.6	15.7	151.2	0.7	1,009.0	49.1
IV	1,447.2	0.7	234.7	1.0	1,214.2	23.2	150.6	0.3	1,040.0	50.4
Year	5,783.5	1.3	976.4	2.3	4,810.7	67.0	605.9	0.3	4,137.6	201.6
1989										
I	1,388.8	0.3	219.6	1.4	1,170.8	9.1	155.1	0.48	1,006.1	48.7
II	1,394.1	0.5	257.3	7.6	1,144.8	9.7	164.8	0.81	969.5	46.8
III	1,389.2	0.8	245.1	9.9	1,154.8	16.2	161.2	0.69	976.8	47.1
IV	1,413.7	0.7	227.0	5.6	1,193.0	17.0	160.5	0.36	1,015.1	48.8
Year 4/	5,585.8	2.3	949.0	24.5	4,663.6	52.0	641.6	0.36	3,969.6	191.7

1/ Totals may not add due to rounding. 2/ Shell eggs and approximate shell-egg equivalent of egg products. 3/ Hatching for 1986-present calculated by the new method. 4/ Preliminary.-- Not applicable for total egg supply and utilization.

U.S. Poultry Trade

Record Poultry Exports in 1989

Poultry meat exports reached a record value of $516 million in 1989. Japan, Hong Kong, Singapore, Mexico, Canada, and the Caribbean nations were the major customers for U.S. poultry products. The value of 1989 poultry exports totaled $720 million, of which 61 percent was broiler meat; 13 percent, eggs and egg products; 10 percent, baby chicks; and 3 percent, turkey meat. The share of annual production volume exported was 5.6 percent for broilers, 1.6 percent for eggs, 1 percent for turkeys, and 0.5 percent for baby chicks.

Broiler Exports Set Record in 1989

Broiler exports hit a record again in 1989, rising 15 percent by value from 1988 to $441 million. Volume surged 27 percent to 975 million pounds, but the average export unit value declined 10 percent. Exports increased sharply to Hong Kong, Japan, and the USSR. Relatively low U.S. prices for dark meat parts were the primary reason for this growth. Parts made up 96 percent of broiler exports.

Table 40--U.S. broiler exports to major importers, January-December, 1988-1989

Country or area	1988	1989
	1,000 lb.	
Japan	252,538	339,895
Hong Kong	101,742	206,612
Mexico	97,970	90,116
Canada	52,863	66,329
Singapore	54,471	57,045
Jamaica	58,833	54,480
U.S.S.R.	0	25,800
Spain	12,669	12,237
French Polynesia	9,810	11,643
Netherlands Antilles	12,981	10,571
Antigua	7,507	7,743
St. Lucia	10,444	7,433
Other	93,609	84,810
Grand Total	765,437	974,714

Table 41--U.S. mature chicken exports to major importers, January-December, 1988-1989

Country or area	1988	1989
	1,000 lb.	
Netherlands Antilles	132	4,393
Mexico	11,951	3,794
Canada	2,056	3,223
St. Lucia	57	3,103
Aruba	80	1,508
Antigua	136	1,178
Jamaica	1,084	821
St. Christ-Nevis	92	787
Japan	2,920	765
Dominica	24	725
Grenada	71	711
Other	7,061	3,785
Grand Total	25,664	24,793

Leading importing countries of U.S. broiler meat in 1989 remained unchanged from 1988, with the notable exception of the USSR. The USSR, which had not purchased U.S. broiler meat for several years, imported 26 million pounds in late 1989 and became the seventh largest importer for the year.

Broiler exports under the Export Enhancement Program (EEP) declined to their lowest since the program began in 1986, reflecting higher bonus requests. No broiler meat EEP exports were made to Iraq or Egypt, formerly large participants, but those to Saudi Arabia and the Persian Gulf states increased. Total EEP broiler sales in 1989 made up about 1 percent of U.S. broiler exports. The average bonus approved by USDA was about 25 cents per pound, about 10 percent above that of 1988, but below that requested by exporters.

Another Broiler Export Record Likely

Another broiler export record is expected in 1990 because sales to Japan and other Pacific Rim markets will likely remain strong. Although exports could decline to Mexico and Canada, where production is expected to increase, the USSR and some Eastern European countries will become a major new market.

Sales to the USSR from October 1989 through January 1990 totaled about 175 million pounds. Shipment of these sales, plus 33 million pounds to Romania, is expected to be completed by May, and is expected to push first-half 1990 broiler exports sharply above those of a year ago. The USSR's purchases of U.S. broilers in 1990 could be second only to Japan. The continued availability of relatively low-priced broiler parts in the United States will, however, remain a major determinant in the competitiveness of these products in the export market. Sharp increases in leg quarter prices, such as those experienced in February when they were running 15-20 percent above a year earlier, could damage competitiveness. France and Brazil are also exporting poultry to the USSR.

Turkey Exports To Increase in 1990

Turkey exports during 1990 are expected to rise 15-20 percent to approximately 48 million pounds. Mexico and the Pacific Rim are projected to continue as strong markets; West Germany has also begun to increase its purchases. In December 1989 the USSR imported 1 million pounds of U.S. turkeys parts. A sale of 10 loads of drumsticks totaling about 360,000 pounds was negotiated with the USSR in January. Lower U.S. turkey prices are expected to boost competitiveness. During October-January, turkey drumsticks in the Northeast averaged 21 cents a pound, wholesale, com-

Table 42--U.S. turkey exports to major importers, January-December, 1988-1989

Country or area	1988	1989
	1,000 lb.	
Mexico	6,647	8,460
Canada	1,402	5,463
Hong Kong	2,341	3,197
Western Samoa	1,619	2,577
Japan	3,018	1,956
Ivory Coast	3,377	1,719
South Africa	2,103	1,310
Micronesia	813	1,208
Marshall Islands	957	1,115
U.S.S.R.	0	1,011
Switizerland	20	819
Other	28,603	11,525
Grand Total	50,900	40,360

Table 43--U.S. egg exports to major importers, January-December, 1988-1989 1/

Country or area	1988	1989
	1,000 dozen	
Japan	61,680	28,654
Canada	12,396	15,487
Mexico	19,275	14,997
Hong Kong	11,647	7,263
Iraq	14,178	5,003
Jamaica	2,689	4,120
Federal Rep of Germany	2,810	1,948
Haiti	1,151	1,577
Dominican Republic	835	1,433
Brazil	105	1,282
Other	15,070	9,813
Grand Total	141,836	91,577

1/ Shell, and shell equivalent of egg products.

pared with 35 cents a year earlier. In mid-February the drumstick price averaged 26 cents per pound, but was still below the 37 cents of a year earlier.

Egg Exports to Recover in 1990

Egg exports are expected to increase about 10 percent in 1990 and exceed 100 million dozen. Both Canada and Japan will likely import more eggs. Expected lower U.S. egg prices relative to the EC should boost U.S. egg product sales to Japan and other countries. Sales under the EEP and other export programs will also help determine 1990 export levels. Table egg sales under EEP were low in 1989, totaling about 3 million dozen and making up slightly more than 3 percent of total U.S. egg exports. The sales went to Hong Kong, and the average bonus received was 10 cents per dozen.

Egg Imports Up Sharply in 1989

Total egg imports at about $28 million made up 20 percent of the value of all poultry product imports, and were up 82 percent from a year earlier, with 53 percent coming from Canada. Hatching eggs made up about 50 percent, eggs for breaking about 35 percent, and egg products about 15 percent of total egg import value. Imports of live poultry and various kinds of poultry meat increased to about $30 million, with 50 percent coming from Canada.

During 1990, egg imports should lessen when U.S. egg prices recede from relatively high 1989 levels, making U.S. eggs more price competitive once again for use by egg processors.

Table 44--Red meat supply and utilization, carcass and retail weight 1/

Year	Production: Commer-cial	Production: Farm	Begin-ning stocks	Im-ports	Total supply	Ex-ports	Ending stocks	Total disap-pearance	Per capita: Carcass weight	Per capita: Retail weight
	Million pounds								Pounds	
Beef:										
1988										
I	5,700	58	386	703	6,847	134	419	6,294	25.6	18.0
II	5,784	25	419	668	6,896	155	332	6,409	26.1	18.4
III	6,185	24	332	585	7,126	188	409	6,529	26.5	18.7
IV	5,755	58	409	423	6,645	203	422	6,020	24.3	17.2
Year	23,424	165	386	2,379	26,354	680	422	25,252	02.5	72.3
1989										
I	5,529	58	422	566	6,575	212	397	5,966	24.1	17.0
II	5,777	25	397	533	6,732	271	322	6,139	24.7	17.4
III	5,892	24	322	524	6,762	284	307	6,171	24.8	17.5
IV	5,775	58	307	532	6,672	300	326	6,046	24.2	17.1
Year	22,973	165	422	2,155	25,715	1,067	326	24,322	97.9	69.0
1990 2/										
Year	23,375	165	326	2,115	25,981	1,200	310	24,471	97.6	68.8
Pork:										
1988										
I	3,790	22	347	310	4,469	25	419	4,025	16.4	15.5
II	3,727	9	419	287	4,442	60	439	3,943	16.0	15.2
III	3,775	8	439	274	4,496	51	352	4,093	16.6	15.7
IV	4,331	22	352	266	4,971	59	413	4,499	18.2	17.2
Year	15,623	61	347	1,137	17,168	195	413	16,560	67.2	63.5
1989										
I	3,887	22	413	251	4,573	55	470	4,048	16.3	15.5
II	3,928	9	470	247	4,654	66	462	4,126	16.6	15.8
III	3,789	8	462	198	4,457	66	339	4,052	16.3	15.4
IV	4,155	22	339	204	4,720	78	285	4,357	17.5	16.6
Year	15,759	61	413	900	17,133	265	285	16,583	66.7	63.2
1990 2/										
Year	15,525	61	285	940	16,811	255	375	16,181	64.5	61.2
Veal:										
1988										
I	97	4	4	9	114	2	5	107	0.4	0.4
II	92	1	5	4	102	2	4	96	0.4	0.3
III	99	1	4	6	110	3	3	104	0.4	0.3
IV	99	3	3	8	113	3	5	105	0.4	0.4
Year	387	9	4	27	427	10	5	412	1.7	1.4
1989										
I	91	4	5	0 3/	100	0	7	93	0.4	0.3
II	85	1	7	0	93	0	6	87	0.4	0.3
III	84	1	6	0	91	0	5	86	0.3	0.3
IV	84	3	5	0	92	0	4	88	0.4	0.3
Year	344	9	5	0	358	0	4	354	1.4	1.2
1990 2/										
Year	340	9	4	0	353	0	4	349	1.4	1.2
Lamb and Mutton:										
1988										
I	85	2	8	19	114	0	7	107	0.4	0.4
II	80	1	7	15	103	0	9	94	0.4	0.3
III	80	1	9	8	98	0	7	91	0.4	0.3
IV	84	2	7	9	102	1	6	95	0.4	0.3
Year	329	6	8	51	394	1	6	387	1.6	1.4
1989										
I	87	2	6	16	111	1	7	103	0.4	0.4
II	80	1	7	16	104	0	8	96	0.4	0.3
III	82	1	8	15	106	1	7	98	0.4	0.4
IV	92	2	7	15	116	0	8	108	0.4	0.4
Year	341	6	6	62	415	2	8	405	1.6	1.4
1990 2/	355	6	8	63	432	1	7	424	1.7	1.5
Total red meat:										
1988										
I	9,672	86	745	1,041	11,543	161	850	10,532	42.9	34.3
II	9,683	36	850	974	11,543	217	784	10,542	42.9	34.2
III	10,139	34	784	873	11,830	242	771	10,817	43.8	35.0
IV	10,269	85	771	706	11,831	266	846	10,719	43.3	35.0
Year	39,763	241	745	3,594	44,343	886	846	42,611	173.0	138.6
1989										
I	9,594	86	846	833	11,359	268	881	10,210	41.2	33.1
II	9,870	36	881	796	11,583	337	798	10,448	42.1	33.8
III	9,847	34	798	737	11,416	351	658	10,407	41.8	33.6
IV	10,106	85	658	751	11,600	378	623	10,599	42.5	34.3
Year	39,417	241	846	3,117	43,621	1,334	623	41,664	167.6	134.8
1990 2/										
Year	39,595	241	623	3,118	43,577	1,456	696	41,425	165.2	132.6

1/ May not add due to rounding. 2/ Forecast. 3/ Beginning in 1989 veal trade no longer reported separately.

Table 45--Poultry supply and utilization

Year	Slaughter: Federally Inspected	Slaughter: Other	Slaughter: Total	Beginning stocks	Total supply	Exports	Ending stocks	Total disappearance	Per capita Retail weight
	Million pounds								Pounds
Young chicken:									
1988									
I	3,996	18	4,015	25	4,039	163	36	3,841	15.6
II	4,079	19	4,098	36	4,134	190	41	3,903	15.9
III	4,035	5	4,039	41	4,080	198	32	3,851	15.6
IV	4,015	13	4,028	32	4,060	214	36	3,810	15.4
Year	16,124	56	16,180	25	16,205	765	36	15,404	62.5
1989									
I	4,129	12	4,142	36	4,178	213	32	3,932	15.9
II	4,389	15	4,404	32	4,436	249	34	4,153	16.7
III	4,395	16	4,411	34	4,445	233	36	4,177	16.8
IV	4,420	15	4,436	36	4,472	275	38	4,159	16.7
Year 2/	17,334	58	17,392	36	17,428	970	38	16,420	66.0
1990 2/									
Year	18,485	64	18,549	38	18,587	1,040	30	17,517	69.8
Other chicken:									
1988									
I	153	28	181	188	369	6	197	166	0.7
II	150	27	177	197	374	4	161	209	0.8
III	112	20	132	161	293	7	147	139	0.6
IV	125	23	148	147	295	8	157	130	0.5
Year	540	97	638	188	826	26	157	644	2.6
1989									
I	137	25	161	157	318	6	146	166	0.7
II	135	24	160	146	306	5	157	144	0.6
III	132	24	156	157	313	7	155	151	0.6
IV	126	23	148	155	303	7	190	106	0.4
Year 2/	530	95	625	157	782	24	190	568	2.3
1990 2/									
Year	535	97	632	190	822	20	150	652	2.6
Total chicken:									
1988									
I	4,149	46	4,195	213	4,408	169	232	4,007	16.3
II	4,229	47	4,275	232	4,508	194	202	4,111	16.7
III	4,147	25	4,171	202	4,373	205	180	3,989	16.2
IV	4,140	36	4,176	180	4,355	223	192	3,940	15.9
Year	16,665	153	16,818	213	17,031	791	192	16,047	65.1
1989									
I	4,266	37	4,303	192	4,496	219	178	4,098	16.5
II	4,524	39	4,563	178	4,742	253	192	4,296	17.3
III	4,527	39	4,567	192	4,758	239	191	4,328	17.4
IV	4,546	38	4,584	191	4,775	282	228	4,265	17.1
Year 2/	17,864	153	18,017	192	18,210	994	228	16,988	68.3
1990 2/									
Year	19,020	161	19,181	228	19,409	1,060	180	18,169	72.4
Turkey:									
1988									
I	837	10	846	266	1,112	13	339	760	3.1
II	981	4	985	339	1,324	11	457	856	3.5
III	1,066	19	1,084	457	1,541	15	573	953	3.9
IV	1,040	12	1,053	573	1,626	11	250	1,364	5.5
Year	3,923	45	3,968	266	4,234	51	250	3,934	16.0
1989									
I	804	8	811	250	1,061	8	269	784	3.2
II	1,014	14	1,028	269	1,297	10	455	833	3.4
III	1,176	17	1,193	455	1,648	12	569	1,067	4.3
IV	1,179	17	1,197	569	1,766	12	234	1,520	6.1
Year 2/	4,174	56	4,229	250	4,479	42	234	4,203	16.9
1990 2/									
Year	4,400	50	4,450	234	4,684	48	250	4,386	17.5
Total poultry:									
1988									
I	4,986	55	5,042	479	5,521	182	571	4,767	19.4
II	5,210	51	5,261	571	5,832	206	659	4,968	20.2
III	5,212	43	5,256	659	5,914	220	752	4,942	20.0
IV	5,180	48	5,228	752	5,981	234	442	5,304	21.4
Year	20,588	198	20,786	479	21,265	842	442	19,981	81.1
1989									
I	5,070	45	5,114	442	5,557	227	448	4,882	19.7
II	5,539	53	5,591	448	6,039	264	646	5,129	20.7
III	5,703	56	5,760	646	6,406	251	760	5,395	21.7
IV	5,725	55	5,781	760	6,541	294	462	5,785	23.2
Year 2/	22,037	209	22,246	442	22,689	1,035	462	21,191	85.2
1990 2/									
Year	23,420	212	23,632	462	24,094	1,108	430	22,556	89.9

1/ May not add due to rounding. 2/ Forecast.

Table 46--Total red meat and poultry supply and utilization, carcass and retail weight 1/

Year	Total production	Beginning stocks	Imports	Total supply	Exports	Ending stocks	Total disappearance	Per capita Carcass weight	Per capita Retail weight
	Million pounds							Pounds	
Total red meat and poultry:									
1988									
I	14,799	1,224	1,041	17,064	343	1,421	15,299	62.3	53.8
II	14,979	1,421	974	17,375	423	1,443	15,509	63.0	54.4
III	15,429	1,443	873	17,744	462	1,523	15,759	63.9	55.1
IV	15,582	1,523	706	17,811	500	1,288	16,023	64.8	56.5
Year	60,790	1,224	3,594	65,608	1,728	1,288	62,592	254.1	219.7
1989									
I	14,794	1,288	833	16,916	495	1,329	15,092	60.9	52.8
II	15,497	1,329	796	17,622	601	1,444	15,577	62.7	54.5
III	15,641	1,444	737	17,822	602	1,418	15,802	63.5	55.2
IV	15,972	1,418	751	18,141	672	1,085	16,384	65.7	57.5
Year	61,905	1,288	3,117	66,310	2,369	1,085	62,855	252.8	220.0
1990 2/									
Year	63,468	1,085	3,118	67,671	2,564	1,126	63,981	255.1	222.5

1/ May not add due to rounding. 2/ Forecast.

Table 47--Average retail price per pound of specified meat cuts

Year and item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
						Dollars						
Choice Beef:												
Ground chuck												
1988	1.74	1.74	1.75	1.74	1.74	1.77	1.75	1.74	1.77	1.78	1.81	1.79
1989	1.81	1.80	1.85	1.82	1.82	1.80	1.81	1.82	1.82	1.84	1.87	1.88
1990	1.91											
Ground beef												
1988	1.31	1.32	1.34	1.34	1.36	1.39	1.37	1.37	1.37	1.39	1.41	1.40
1989	1.40	1.37	1.43	1.42	1.44	1.44	1.44	1.45	1.46	1.45	1.49	1.50
1990	1.56											
Chuck roast, bone in												
1988	1.64	1.74	1.69	1.72	1.80	1.78	1.70	1.67	1.74	1.74	1.74	1.80
1989	1.81	1.91	1.87	1.89	1.90	1.86	1.86	1.78	1.88	1.89	1.92	2.00
1990	2.03											
Round roast, boneless												
1988	2.56	2.61	2.67	2.60	2.61	2.66	2.63	2.64	2.64	2.60	2.68	2.68
1989	2.75	2.75	2.76	2.77	2.78	2.73	2.73	2.71	2.78	2.78	2.77	2.78
1990	2.91											
Rib roast, bone in												
1988	3.57	3.59	3.66	3.75	3.72	3.93	4.02	4.04	4.12	4.12	4.10	4.03
1989	4.11	4.04	4.06	4.16	4.24	4.06	4.34	4.29	4.19	4.17	4.19	4.21
1990	4.29											
Round steak, boneless												
1988	2.88	2.94	2.94	3.01	3.00	3.05	2.99	2.99	3.04	2.98	3.00	3.01
1989	3.07	3.09	3.12	3.14	3.10	3.06	3.11	3.12	3.10	3.12	3.18	3.17
1990	3.30											
Sirloin steak, bone in												
1988	2.99	3.04	3.12	3.18	3.35	3.49	3.54	3.39	3.45	3.30	3.36	3.23
1989	3.39	3.40	3.61	3.57	3.70	3.67	3.70	3.66	3.62	3.55	3.57	3.46
1990	3.58											
Chuck steak, bone in 1/												
1988	1.61	1.62	1.64	1.65	1.67	1.71	1.70	1.69	1.70	1.70	1.72	1.71
1989	1.74	1.74	1.78	1.78	1.79	1.78	1.79	1.79	1.80	1.80	1.81	1.83
1990	1.86											
T-Bone steak, bone in												
1988	4.31	4.27	4.33	4.43	4.54	4.90	5.18	5.20	4.86	4.84	4.83	4.97
1989	4.95	4.91	5.05	5.04	5.14	5.16	5.22	5.10	5.15	5.08	4.99	5.04
1990	5.11											
Porterhouse steak, 1/ bone in												
1988	4.40	4.43	4.48	4.51	4.56	4.66	4.63	4.60	4.64	4.64	4.68	4.68
1989	4.74	4.76	4.86	4.86	4.89	4.87	4.88	4.89	4.90	4.90	4.96	4.99
1990	5.09											
Pork:												
Bacon, sliced												
1988	1.95	1.94	1.92	1.91	1.90	1.90	1.91	1.88	1.84	1.86	1.80	1.79
1989	1.80	1.80	1.79	1.75	1.68	1.69	1.71	1.72	1.72	1.77	1.82	1.96
1990	1.97											
Chops, center cut												
1988	2.66	2.72	2.68	2.71	2.78	2.93	2.90	2.87	2.90	2.77	2.67	2.65
1989	2.78	2.75	2.80	2.80	2.76	2.82	2.91	2.92	2.95	2.89	2.97	2.85
1990	3.02											
Ham, rump or shank half 1/												
1988	1.63	1.57	1.60	1.58	1.58	1.62	1.62	1.62	1.61	1.59	1.56	1.55
1989	1.58	1.57	1.57	1.58	1.56	1.58	1.61	1.63	1.62	1.63	1.66	1.66
1990	1.70											
Sirloin roast, bone in 1/												
1988	1.92	1.90	1.90	1.88	1.89	1.94	1.93	1.93	1.92	1.89	1.86	1.85
1989	1.88	1.88	1.88	1.88	1.86	1.89	1.92	1.94	1.93	1.94	1.97	1.98
1990	2.02											
Shoulder picnic, bone in												
1988	1.14	1.13	1.14	1.12	1.09	1.15	1.13	1.11	1.11	1.10	1.12	1.10
1989	1.12	1.06	1.06	1.08	1.07	1.08	1.09	1.10	1.10	1.10	1.12	1.17
1990	1.14											
Sausage, fresh, pork, loose												
1988	2.05	1.97	1.99	2.02	2.02	1.95	1.99	1.94	1.95	1.90	1.89	1.92
1989	1.92	1.94	1.92	1.93	1.94	1.93	1.99	2.04	2.02	2.10	2.11	2.12
1990	2.12											
Miscellaneous cuts:												
Ham, canned, 3 or 5 lb												
1988	2.77	2.75	2.71	2.73	2.74	2.73	2.77	2.73	2.74	2.74	2.69	2.60
1989	2.75	2.71	2.63	2.70	2.64	2.68	2.66	2.65	2.70	2.68	2.61	2.62
1990	2.72											
Frankfurters, all meat												
1988	2.02	2.04	2.05	2.01	2.02	2.02	2.01	2.02	2.00	2.02	2.03	2.04
1989	2.08	2.07	2.07	2.03	2.05	2.02	2.01	2.09	2.09	2.04	2.10	2.11
1990	2.16											
Bologna												
1988	2.24	2.23	2.23	2.20	2.18	2.24	2.26	2.29	2.25	2.27	2.28	2.24
1989	2.22	2.24	2.23	2.24	2.23	2.24	2.24	2.27	2.34	2.38	2.37	2.40
1990	2.42											

1/ While these specific cut prices are no longer available from the Bureau of Labor Statistics (BLS), ERS uses the BLS index and historical data to estimate these prices monthly.
Source: Bureau of Labor Statistics.

Table 48--Selected price statistics for meat animals and meat, 1989-1990

Item	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
	Dollars per cwt											
Slaughter Steers:												
Omaha												
Choice, 1000-1100 lb	72.92	75.75	75.31	74.52	71.71	70.74	71.09	68.44	69.69	72.48	75.21	76.73
Select, 1000-1100 lb	70.94	73.48	73.38	72.52	69.71	68.47	69.06	66.94	67.23	69.63	71.99	74.02
California												
Choice, 1000-1100 lb	74.56	76.63	74.56	73.25	70.69	72.13	73.88	70.00	72.88	74.88	76.63	77.19
Colorado												
Choice, 1100-1300 lb	74.82	78.51	77.77	75.39	71.86	71.35	73.17	69.25	72.24	75.21	77.43	78.45
Texas												
Choice, 1000-1100 lb	75.40	78.87	77.51	75.30	71.71	71.28	73.88	69.75	72.09	75.47	77.97	79.02
Slaughter heifers:												
Omaha												
Choice, 1000-1200 lb	73.19	76.80	76.57	75.03	71.63	70.44	71.32	68.29	70.08	73.30	75.71	77.69
Select, 900-1000 lb	69.54	72.85	72.98	71.98	68.88	68.06	68.50	65.50	66.56	69.38	71.58	73.32
Cows:												
Omaha												
Commercial	47.04	45.56	44.75	44.63	47.42	48.52	49.63	51.86	48.71	45.67	49.00	49.38
Breaking Utility	46.92	45.89	45.19	45.57	48.56	49.12	50.39	52.42	49.42	46.60	49.38	49.78
Boning Utility	51.29	48.33	47.58	47.00	49.83	50.42	51.35	52.67	51.54	48.70	50.72	51.22
Canner	45.04	42.10	40.42	39.71	43.33	43.29	45.00	46.31	44.08	42.57	42.48	43.27
Cutter	49.71	46.57	44.67	43.90	47.25	49.08	49.12	51.19	49.21	45.67	48.29	48.40
Vealers: 1/												
Choice, So. St. Paul	225.06	257.50	266.25	260.05	258.44	246.88	263.00	258.75	244.38	242.90	230.00	248.50
Feeder steers: 2/												
Kansas City												
Medium No. 1,												
400-500 lb	99.33	104.60	98.50	96.88	97.50	98.50	101.00	nq	nq	96.63	95.13	97.40
600-700 lb	85.56	84.45	82.63	83.50	85.38	87.13	88.40	88.63	88.25	87.38	86.25	85.70
All weights and grades	82.91	80.98	78.58	78.25	79.08	81.64	84.54	83.56	81.24	82.65	82.30	82.47
Okla. City												
Medium No. 1												
400-500 lb	106.35	107.50	101.94	96.12	105.35	103.70	103.82	100.42	100.71	102.03	99.77	101.23
600-700	87.86	85.98	84.11	81.38	87.10	89.54	88.48	87.01	85.62	86.34	88.67	87.34
700-800	84.50	80.63	76.25	77.30	82.47	84.22	85.34	83.88	83.32	85.15	87.11	84.86
Amarillo												
Medium No. 1, 600-700 lb	85.50	82.70	79.50	80.90	83.17	86.67	85.30	82.00	83.88	82.80	85.17	85.45
Georgia Auctions												
Medium No. 1, 600-700 lb	83.00	82.60	77.50	79.00	80.50	81.00	82.40	79.50	79.25	79.00	79.33	80.40
Medium No. 2, 400-500 lb	88.25	89.20	84.63	83.40	86.13	87.33	87.10	84.13	83.13	81.00	80.33	83.20
Feeder heifers:												
Medium No. 1,												
Kansas City												
400-500 lb	87.75	89.25	85.83	84.70	86.50	88.25	89.75	nq	nq	86.50	84.38	85.60
600-700 lb	80.50	77.81	75.00	75.50	78.38	79.50	83.30	83.00	82.88	81.88	80.88	80.80
Okla. City												
400-500 lb.	92.08	90.58	88.03	84.36	87.83	88.27	89.84	87.53	87.64	86.59	83.01	87.64
600-700 lb.	81.31	79.35	75.53	73.87	79.31	82.14	83.06	80.88	80.05	80.64	82.91	81.83
Slaughter hogs:												
Barrows and gilts												
Omaha No. 1 & 2,												
230-240 lb	42.12	40.49	38.38	44.36	47.72	48.46	48.17	44.87	48.23	47.15	51.03	49.33
All weights	40.96	40.96	37.08	42.23	45.66	46.56	46.53	44.83	46.81	45.92	49.68	48.52
Sioux City	41.11	39.88	37.22	42.40	46.24	47.26	47.04	44.58	47.49	46.39	49.65	48.41
7 markets 3/	40.91	39.85	37.06	42.37	46.10	47.06	46.84	44.32	47.15	45.77	49.33	47.94
Sows:												
7 markets 3/	35.67	35.27	32.07	33.94	34.54	34.70	36.52	38.33	41.46	38.53	41.73	43.88
Feeder pigs:												
No. 1 & 2, So. Mo., 40-50 lb (per hd.)	34.18	39.55	34.74	34.24	28.85	24.25	30.00	30.72	37.27	38.33	36.21	41.78
Slaughter lambs:												
Choice, San Angelo	68.83	70.90	78.17	73.56	72.63	67.79	67.28	63.81	59.63	56.06	61.00	55.20
Choice, So. St. Paul	65.48	69.56	69.67	73.21	70.45	66.13	63.76	60.40	58.90	54.60	57.69	55.88
Ewes, Good,												
San Angelo	53.28	47.55	42.45	38.95	37.10	31.92	30.65	30.31	28.00	35.25	39.42	38.30
So. St. Paul	24.88	21.92	18.93	13.56	17.30	18.08	15.06	14.05	14.98	16.70	23.52	23.30
Feeder lambs:												
Choice, San Angelo	84.38	95.30	88.06	78.18	75.94	74.08	75.50	76.06	74.88	74.88	76.00	72.10
Choice, So. St. Paul	85.00	85.68	85.00	79.80	69.62	68.00	69.04	69.74	70.68	68.08	70.65	65.96
Farm prices:												
Beef cattle	71.50	72.00	70.00	68.80	67.60	68.00	69.70	68.20	68.70	69.80	71.00	71.60
Calves	95.90	94.00	90.50	91.20	94.20	94.70	94.20	91.10	88.10	86.70	89.10	90.20
Hogs	40.40	39.30	36.90	41.60	45.10	45.90	45.70	43.40	46.30	45.00	48.20	46.90
Sheep	34.50	30.30	25.40	21.60	22.20	24.60	23.40	23.20	22.70	29.50	31.10	29.20
Lambs	68.40	72.50	75.20	73.10	70.60	68.60	66.60	65.90	62.00	58.70	59.00	57.40

Table 48--Selected price statistics for meat animals and meat, 1989-1990--Continued

Item	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
	Dollars per cwt											
Meat prices:												
Wholesale												
Central U.S. markets												
Steer beef, Choice 600-700 lb	107.98	112.43	113.84	112.62	106.35	104.91	104.31	102.08	103.13	107.05	111.41	113.30
Heifer beef, Choice 550-700 lb	107.90	112.36	113.63	112.49	106.35	104.91	104.23	102.04	103.13	107.05	111.38	113.30
Cow beef, Canner and Cutter	96.93	92.17	89.77	89.74	93.83	95.24	95.33	99.14	96.14	92.92	100.73	99.89
Boxed beef cut-out value 4/	114.30	117.09	118.58	118.53	114.53	113.17	112.83	110.08	110.04	115.06	119.52	121.74
Pork loins 14-18 lb 5/	90.97	91.77	91.59	99.95	108.28	115.10	110.03	105.25	111.78	91.75	107.28	101.36
Pork bellies 12-14 lb	31.41	30.19	25.49	29.11	32.90	31.52	28.82	34.23	36.88	49.96	42.23	48.65
Hams, skinned 14-17 lb	67.11	63.00	61.60	63.30	64.00	64.23	68.00	69.13	80.56	87.00	78.89	68.44
Pork cut-out value 6/	56.18	54.87	52.96	58.42	62.56	63.59	64.38	61.84	65.53	64.78	67.26	63.49
East Coast:												
Lamb, Choice and Prime												
35-45 lb.	146.44	155.25	159.38	149.30	139.31	131.72	127.45	125.44	123.50	124.60	136.22	127.05
55-65 lb.	135.88	142.60	147.06	142.35	139.31	133.03	130.75	121.44	117.69	109.65	122.72	112.25
West Coast:												
Steer beef, Choice 700-800 lb	112.19	117.30	118.94	116.97	111.19	110.44	109.90	107.38	108.63	112.45	115.97	118.65
	Cents per lb											
Retail												
Beef												
Choice	265.2	269.5	269.8	271.9	268.1	271.6	269.5	270.9	270.8	272.9	274.4	281.3
All Fresh	231.9	236.5	238.4	239.4	237.3	240.6	240.1	241.0	241.2	243.7	245.4	247.8
Pork	179.3	179.7	179.5	177.1	179.1	182.8	184.6	184.4	185.8	189.6	191.2	195.1
	1982-84=100											
Price indexes: (BLS)												
Retail meats	114.3	115.5	115.6	115.6	116.1	116.7	117.5	117.7	118.1	119.3	120.0	122.3
Beef and veal	116.6	119.0	119.0	119.6	119.3	119.5	119.7	120.0	120.0	121.3	122.1	124.5
Pork	110.9	111.0	111.2	110.1	111.8	113.6	114.8	114.3	114.9	116.8	117.2	119.7
Other meats	114.0	114.0	114.3	114.4	114.9	115.1	116.6	117.6	118.8	119.0	119.5	121.6
Poultry	128.4	130.3	133.0	137.3	140.1	138.1	136.2	134.0	131.2	126.8	127.8	128.6
Livestock-feed ratios												
Omaha: 7/												
Steer-corn	28.7	29.4	30.2	29.4	28.9	29.6	32.0	30.8	31.1	32.2	32.8	34.2
Hog-corn	16.3	15.4	14.8	16.8	18.5	19.6	20.9	19.8	20.8	20.1	21.7	21.6

1/ Beginning Sept. 10, 1988, prices reported per head. 2/ Reflects new feeder cattle grades. 3/ St. Louis N.S.Y., Kansas City, Omaha, Sioux City, So. St. Joseph, So. St. Paul, and Indianapolis. 4/ Beef, Choice 2-3 550-700 lb. 5/ Prior to 1984, 8-14 lb; 1984 and 1985, 14-17 lb; 1986, 14-18 lb. 6/ U.S. #2, 175 lb. carcass. 7/ Bushels of No. 2 yellow corn equivalent in value to 100 pounds live weight.

Table 49--Selected marketings, slaughter, stocks, and trade for meat animals and meat, 1989

Item	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sept.	Oct.	Nov.	Dec.
						1,000 head						
Federally inspected:												
Slaughter												
Cattle	2,711	2,500	2,744	2,576	2,947	2,951	2,730	2,975	2,706	2,876	2,693	2,600
Steers	1,290	1,228	1,361	1,302	1,482	1,469	1,353	1,456	1,320	1,332	1,257,	1,245
Heifers	827	786	817	743	884	929	882	949	853	904	789	767
Cows	544	445	518	480	526	496	442	507	477	578	591	542
Bulls and stags	50	41	49	51	55	57	53	62	56	62	58	47
Calves	196	175	194	152	157	161	169	189	173	191	175	167
Sheep and lambs	418	415	505	393	435	423	399	476	441	468	467	457
Hogs	7,116	6,619	7,569	7,199	7,277	6,881	6,131	7,392	7,493	7,823	7,815	7,012
Percentage sows	4.7	4.1	4.2	4.0	4.7	5.5	4.9	5.7	4.9	4.6	4.5	4.7
						Pounds						
Average live wt per head												
Cattle	1,152	1,136	1,128	1,117	1,107	1,118	1,126	1,144	1,154	1,156	1,159	1,156
Calves	258	258	255	282	289	278	253	247	255	259	250	237
Sheep and lambs	126	127	126	128	125	120	120	118	120	124	127	129
Hogs	249	247	247	251	251	251	247	247	246	248	251	250
Average dressed wt												
Beef	686	684	675	669	665	673	681	692	696	696	692	688
Veal	156	157	155	167	179	172	156	149	155	157	152	144
Lamb and mutton	65	64	64	65	64	61	61	60	62	64	66	67
Pork	180	178	178	180	180	180	177	177	176	178	181	179
						Million pounds						
Production												
Beef	1,852	1,705	1,844	1,717	1,954	1,979	1,852	2,050	1,874	1,992	1,855	1,783
Veal	30	27	30	26	28	27	26	28	26	30	26	24
Lamb and mutton	27	26	32	25	28	25	24	28	27	29	30	30
Pork	1,274	1,175	1,342	1,291	1,308	1,235	1,081	1,302	1,318	1,387	1,410	1,252
Commercial: 1/						1,000 head						
Slaughter												
Cattle	2,789	2,569	2,822	2,644	3,024	3,025	2,794	3,045	2,773	2,964	2,785	2,681
Calves	203	181	200	158	163	167	174	195	179	198	182	172
Sheep and Lambs	428	425	519	409	447	437	413	494	457	484	482	470
Hogs	7,332	6,791	7,763	7,380	7,480	7,079	6,295	7,587	7,680	8,032	8,039	7,236
						Million pounds						
Production												
Beef	1,896	1,744	1,889	1,757	1,998	2,022	1,889	2,091	1,912	2,041	1,906	1,828
Veal	32	28	31	27	29	29	27	29	28	31	28	25
Lamb and mutton	27	27	33	26	28	26	25	29	28	30	31	31
Pork	1,310	1,204	1,373	1,321	1,341	1,266	1,107	1,333	1,349	1,421	1,446	1,288
Cold storage stocks: 2/												
Beef	318	313	298	273	244	242	249	242	232	224	237	246
Veal	7	7	7	7	7	6	6	6	5	4	4	4
Lamb and mutton	7	6	7	6	7	8	8	8	7	8	8	8
Pork	381	397	394	438	431	383	345	281	280	275	281	257
Total meat	745	762	749	767	735	686	654	579	559	541	555	529
Trade:												
Imports (carcass wt)												
Beef and veal 4/	226.7	161.7	178.1	166.8	187.3	179.1	193.3	186.3	144.3	177.1	180.0	194.5
Lamb, mutton, and goat	6.3	4.5	5.7	6.3	5.6	5.6	5.6	5.6	4.1	5.7	4.5	6.7
Pork	89.8	75.6	85.8	82.1	83.4	81.6	63.2	73.4	67.5	65.9	66.8	66.8
Exports (carcass wt)												
Beef and veal 4/	54.3	62.4	94.9	81.9	92.1	97.3	101.8	99.8	82.8	115.2	93.5	86.0
Lamb and mutton	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.1
Pork	20.2	17.8	16.8	19.5	24.2	22.6	21.3	22.4	22.5	29.4	26.1	24.7

1/ Federally inspected and other commercial. 2/ End of month. Beginning January 1977, excludes beef and pork stocks in cooler. 3/ Less than 50,000 lb. 4/ Beginning January 1989, veal trade is no longer reported separately.

Diaphragm Beef Imports by Japan

by

William D. Gorman and Hiroshi Mori*

Abstract: Changes in the Japanese beef quota system with increased market access raise the possibility of a shift in the type and sources of beef imports. Diaphragm beef has occupied a large share of Japanese imports because it was outside the quota system and subject to lower tariffs. Wholesale pricing of diaphragm beef may indicate some of the future developments in a freer Japanese beef market. Currently, the United States supplies most of Japan's diaphragm beef imports, which account for over 90 percent of fed beef hanging tenders and outside skirts produced by the United States. Wholesale price spreads for diaphragm beef have averaged 20 percent after a 15-percent tariff on the landed price. This additional markup must be considered in estimating regular beef demand.

Keywords: Beef, beef quotas, diaphragm beef, offals, Japan, trade.

Introduction

The Japanese beef market is of great interest to beef exporting countries. The potential for expanded exports to Japan is highlighted by the country's low per capita consumption of beef (16 pounds) relative to poultry or pork (29 and 35 pounds) in 1987, the preference for highly marbled beef, high and growing incomes, and a phased elimination of quotas and other trade constraints for beef. The removal of quotas, to be replaced with higher tariffs, and direct negotiations between Japanese importing companies and exporters, promise easier access to the Japanese market.

Japan has emerged as a major market for U.S. beef and veal products, which totaled 105,584 metric tons product weight (excluding offals) and $638 million in 1988.[1] The Japanese market accounts for approximately 75 percent of the total value of U.S. beef and veal exports. Japan has also been a major importer of beef and veal offals, which are not subject to the beef quotas. Japan imported 88,032 metric tons of U.S. beef and veal offals valued at $480 million in 1988.

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[1]Tonnage and value figures in this article are from the Custom Bureau, Japanese Ministry of Finance. Japan often classifies beef and beef offal products differently than the U.S. Government; hence, U.S. and Japanese figures may not agree. Diaphragm beef in this article follows the Japanese convention and classifies hanging tenders as well as outside skirts as diaphragm meat for quota classification purposes.

Future Japanese Beef Demand

Removing Japanese beef quotas and replacing them with tariffs raise questions about what will happen to Japanese beef consumption. With quantity limits, most marketers try to maximize the unit value (or margin) of imports by dealing in higher priced (or margin) fed beef, for example, versus lower valued (or margin) manufacturing beef. Diaphragm beef is classified as beef in the United States, but as an offal in Japan. This article discusses what may happen in the Japanese beef market by examining the case of diaphragm beef, which has been subject only to tariffs for several years. New data are presented on wholesale prices and markups in the Japanese beef market.

Japanese consumer response to increased beef supplies is an area for which we have limited information. Will exporters be able to sell sharply larger quantities of beef to the Japanese, or will the market soon reach saturation? What will happen to wholesale beef prices in Japan after March 1991? What marketing margins will Japanese importers and wholesalers charge on imported beef? The case of diaphragm beef may help answer these questions.

Category of Edible Offals

Edible offals have become an important factor in Japanese beef trade. Under the Japanese customs classification, there are several categories for beef and veal offals, most of which are imported into Japan outside the beef quota. Offals outside the quota include diaphragm beef, tongue, liver, kidney, heart, and some other minor offals. Tails and spinal cords were removed from the quota on October 1, 1988.

Summary of 1988 Japan Beef Trade Agreement

Japanese beef imports are controlled by a tonnage quota. In 1988, the Japanese Government agreed to expand the quota by 60,000 metric tons yearly and to remove it entirely on April 1, 1991. The agreement also eliminates the involvement of the Livestock Industry Promotion Corporation (LIPC) in regulating imported beef, thus allowing buyers and sellers to deal directly without going through a quasi-government agency. The agreement substantially increases the tariff in 1991 and lowers it the following 2 years. After 1993, tariffs will be negotiated.

Japanese Beef Quota and Tariffs, 1988-93

Fiscal Year Beginning April 1	Quota	Tariff c.i.f. basis
	Metric tons	Percent
1988	274,000	25
1989	334,000	25
1990	394,000	25
1991	No restriction	70
1992	" "	60
1993	" "	50

New Japanese Custom Classification of Bovine Offals, Starting January 1988

Code category	Tariff (%)	Description
0206.10-010	15	Edible (offals) of bovine animals, internal organs and tongues, fresh or chilled
0206.10-090	15	Edible offal of bovine animals, excluding internal organs and tongues, fresh or chilled
0206.21-000	15	Edible (offal) of bovine animals, tongues, frozen
0206.22-000	15	Edible (offal) of bovine animals, livers, frozen
0206.29-010	15	Edible (offal) of bovine animals, internal organs, excluding livers, frozen
0206.29-090	15	Edible offal of bovine animals, excluding tongues or internal organs, frozen
0504.00-011	0	Gut of animals (other than fish) for sausage casing
0504.00-019	0	Gut of animals (other than fish), excluding for sausage casing
0504.00-090	0	Whole and pieces of bladders and stomachs of animals (other than fish)
1602.50-100	0	Whole and pieces of gut, bladders, stomachs of bovine animals, boiled in water

Japanese demand for beef offals has grown primarily because they are good for *yakiniku* and Korean barbecue, and are exempt from quotas and carry lower tariffs than quota beef. Imports of nonquota offals are subject to a tariff of up to 15 percent depending upon classification. In contrast, quota imports are subject to a 25-percent tariff, plus a variable surcharge set according to the quota classification for LIPC services. The surcharges for LIPC services will be removed after March, 1991.

Diaphragm beef includes two cuts and is the principal offal that substitutes for beef and veal. The outside skirt (U.S. definition) is called *harami* in Japan and thin skirt in Australia. The U.S. hanging tender is known as *sagari* in Japan and thick skirt in Australia (6).

Australia is Japan's other major beef and offal supplier. Imports of quota beef, fresh or chilled, from Australia increased 39 percent on a tonnage basis from 1981 to 1987, but the total value decreased 7 percent in yen (fig. A-2). Australian organizations have argued that the declining value of beef exports to Japan is partly due to the rapid increase of nonquota edible offals imported from the United States (10,13). Although there have been no extensive studies on uses of diaphragm beef in Japan, there is a consensus within the Japanese meat industry that imported diaphragm beef may compete with a range of meat items, including lower-value domestic beef (6,11).

Before quotas were relaxed in 1988, outside skirts were often used in making reformed steak to be sold in lower priced family restaurants and in limited amounts through supermarkets. However, wholesale market prices of loin cuts have dropped substantially as imports of regular quota beef have increased. Loin cuts have started replacing outside skirts. There is little economic incentive for using 1,500 yen/kg outside skirts for making a reformed steak to compete with 1,600 yen/kg (grass-fed) or 1,888 yen/kg (grain-fed) loins for steaks.

Most diaphragm beef imported by Japan is used for yakiniku or Korean barbecue, either at lower priced restaurants or at home (4,6,8,10). Quota beef products suitable for *yakiniku* include chuck ribs or short ribs imported in recent years from the United States under the Simultaneous-Buy-Sell System (where Japanese meat processors and wholesalers can deal directly with foreign suppliers) and "corner pieces" cut from the short plate (4,6,8).

Grass-fed chuck roll and chuck and blade imported from Australia also are used for *yakiniku*, depending upon market quotations. Japanese industry sources speculate that nonquota diaphragm beef from the United States may compete more directly with selected cuts of U.S. grain-fed beef than with Australian grass-fed beef. If nonquota diaphragm beef has been replacing mainly grass-fed beef, as some Australians believe, this is an alternative that should be tested before predicting the demand for beef and market shares after the quotas are removed.

Importance of Diaphragm Beef

Japanese trade sources estimate that diaphragm beef (outside skirts and hanging tenders) accounted for 70 percent of all edible offals (including tongues) imported during 1982-87 (fig. A-3). In January 1988, a new series of custom clearance statistics revealed that previous trade journal estimates of quantities and price were very close to the official

Table A-1--Beef offal 1/ imports by Japan, by major countries of origin, and total quota beef imports, 1978 to 1987

	1978		1981		1984		1987	
	Quantity	Price	Quantity	Price	Quantity	Price	Quantity	Price
	Metric tons	Yen/kg	Mt	(Yen/kg)	Mt	(Yen/kg)	Mt	(Yen/kg)
Beef offals								
U.S.	32,991	688	39,686	844	54,501	727	77,234	673
Australia	11,077	474	7,190	590	5,337	608	7,691	422
New Zealand	3,250	389	2,860	562	2,533	519	2,493	413
Canada	2,005	582	2,451	825	2,302	716	2,316	618
Others	807	425	151	344	384	344	1,154	348
Total	50,400	612	52,338	791	65,057	707	90,888	639
U.S. share of beef offals	65.4%		75.8%		83.8%		85.0%	
Quota beef, boneless weight	98,975	466	122,101	715	144,847	762	216,261	533

1/ Excludes guts, tripes and bladders.

Sources: Japan Exports and Imports, Commodity by Country, Japan Tariff Association, various issues.

Figure A-1
Japan's Imports of U.S. Quota Beef and Edible Offals

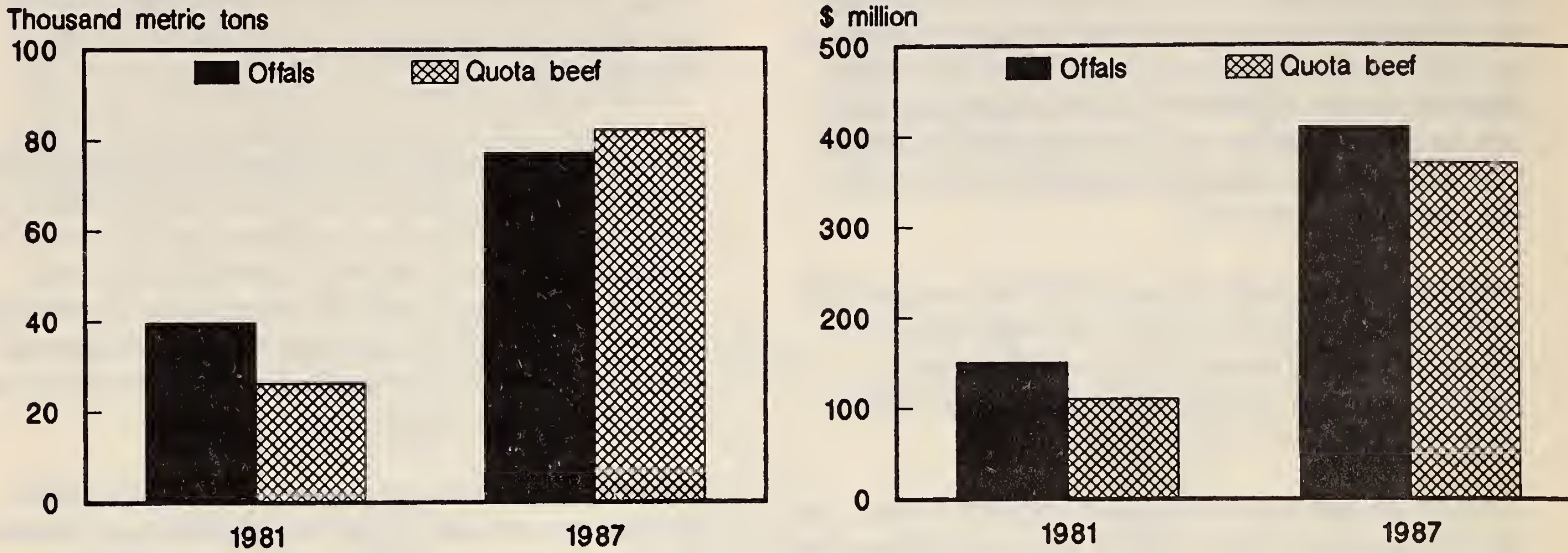


Figure A-2
Market Shares of Japan's Edible Offal Imports Outside the Beef Quota

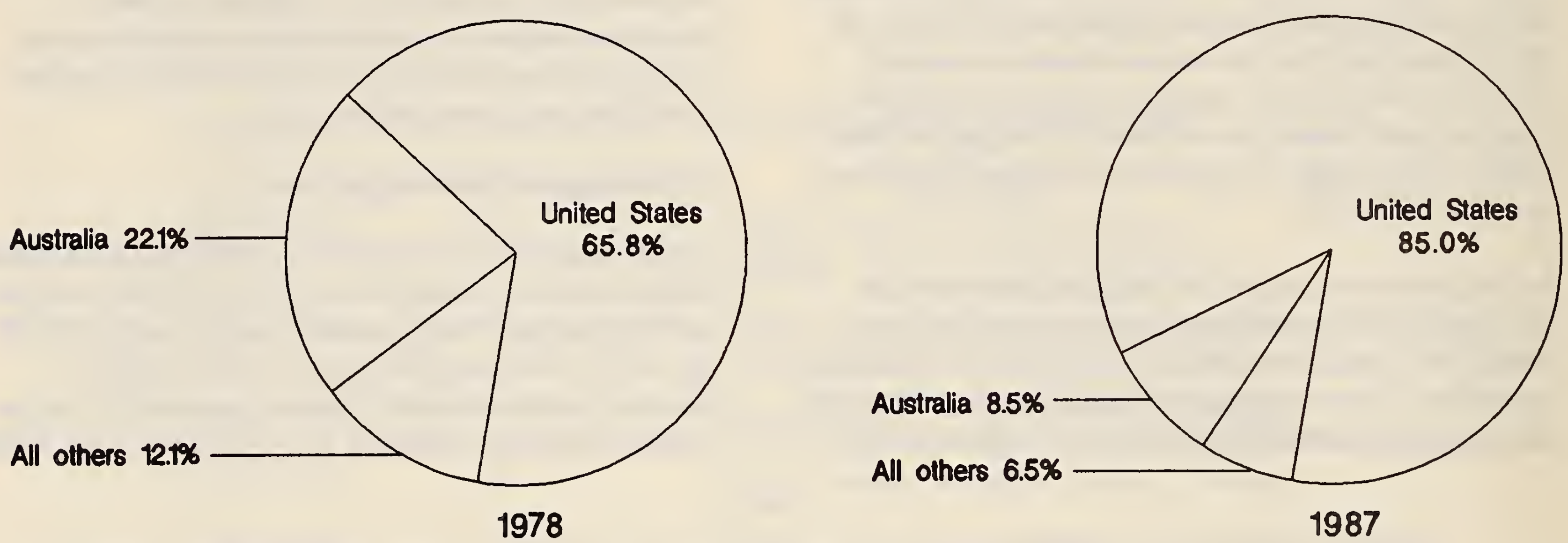


Table A-2--Imports of frozen tongues, livers, and skirts by Japan, by major countries of origin, 1988

	Tongues		Livers		Skirts 1/	
	Quantity Mt	C.i.f. price Yen/kg	Quantity Mt	C.i.f. price Yen/kg	Quantity Mt	C.i.f. price Yen/kg
United States	17,431	528	8,462	123	57,083	815
Australia	1,971	395	42	139	6,893	524
New Zealand	1,100	372	10	93	1,910	501
Canada	440	398	16	45	2,617	695
Others	81	444	-	-	1,310	392
Total	21,009	(505)	8,530	(124)	69,813	(765)

1/ "Internal organs, excluding livers" (#0206.29-010) which do not include tripes and viscera.

Source: Courtesy of the Bureau of Custom, Japanese Ministry of Finance.

Figure A-3

Japan's Imports of Nonquota Frozen Beef Offals, 1988

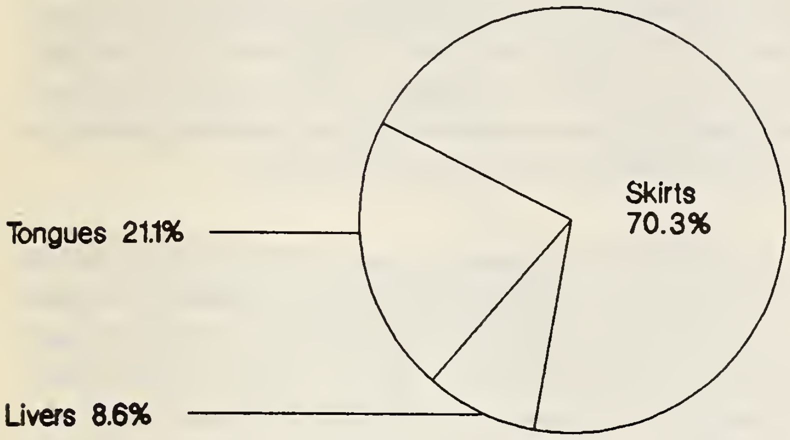
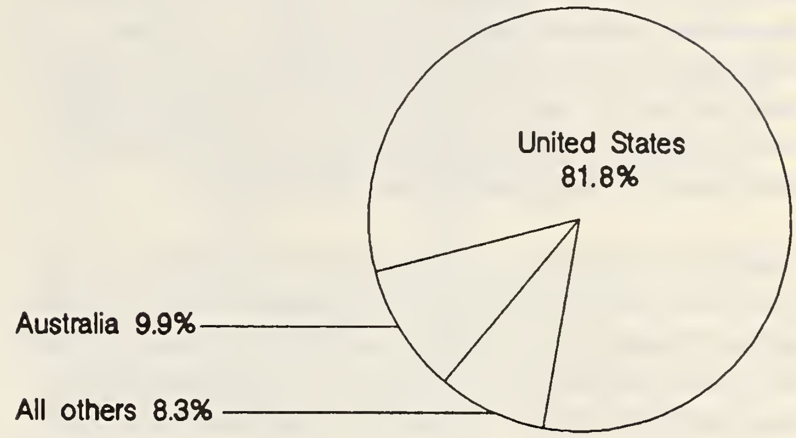


Figure A-4

Market Shares of Japan's Nonqutoa Beef Skirt Imports, 1988



series. The United States accounted for nearly 82 percent of the market (fig. A-4).

Frozen tongues and frozen livers accounted for 21 and 9 percent of frozen edible offal imports (table A-2). The United States provided 99 percent of fresh or chilled beef offals in 1988, when most other countries shipped frozen offals to Japan (3). Some chilled offals, especially tongue and liver, are being air freighted to Japan to attract premium prices over frozen meat products (11).

Prices of Imported Diaphragm Beef

Japanese wholesale prices of imported diaphragm beef fluctuated widely from 1985 through June 1989. Prices of U.S. grain-fed product consistently have been 55 to 250 percent higher than prices for the predominantly grass-fed Australian product (fig. A-5). Prices of U.S. hanging tenders and outside skirts and Australian thin and thick skirts have all varied substantially, sometimes exceeding 50 percent within 1 year. Reasons for the wide variation are not consistent, but include differences in season, exchange rates, and demand and supply patterns among the United States, Australia, and Japan.

The supply of diaphragm beef available to the Japanese market is largely determined by the number of fed animals slaughtered in the United States. A 660-pound carcass yields about 3.17 pounds of outside skirt and 1.91 pounds of hanging tenders. Average U.S. dressed weights have been increasing and are now near 680 pounds, yielding slightly more in outside skirts and hanging tenders. In 1988, Japan imported 57,083 metric tons of hanging tenders and outside skirts, which required approximately 25 million head of slaughter animals, or over 90 percent of U.S. fed slaughter.

Japanese demand for diaphragm beef determines the prices of diaphragm beef in the United States because of Japan's overwhelming market position. The number of fed animals slaughtered annually in the United States did not change dramatically during 1985-89, though there has been variation in seasonal slaughter patterns of fed cattle. Therefore, wide Japanese wholesale price variations in the past 5 years were probably not caused by changes in the supply of U.S. diaphragm beef. The Japanese price variability must relate to demand rather than supply factors.

Table A-3--Selected wholesale market prices of U.S. diaphragm beef and selected cuts of imported quota beef, Tokyo

Date	U.S. strip loin	U.S. short plate	U.S. chuck rib	Aus. chuck & blade	Aus. full brisket	U.S. outside skirts	U.S. hanging tender
	yen/kg						
Jan. 88	2138	651	n/a	768	665	1135	905
July 88	2578	669	1956	914	743	1685	1415
Dec. 88	1937	933	1294	912	917	975	1140
June 89	1888	845	1929	964	1062	1365	1500
Nov. 89	1733	746	1508	735	824	1005	1240

Source: CHIKUSAN NIPPO and SHOKUNIKU SOKUHO, various issues.

Diaphragm beef imported from the United States typically sells at higher prices than many cuts of quota beef (table A-3). Wholesale prices of outside skirts and hanging tenders have nearly always exceeded prices for U.S. short plate and Australian chuck and blade and full briskets. At times, diaphragm beef prices have approached U.S. strip loin and chuck rib prices. Prices of imported U.S. hanging tenders were 78 percent higher than short plate and only 20 percent lower than U.S. strip loin in June 1989 (table A-3).

Prices of U.S. diaphragm beef during 1985-89 did not closely correlate with quota beef prices. Prices of diaphragm beef cannot be easily predicted from changes in quota beef prices. The lack of correlation casts doubt on the suggestion that quota beef will substitute directly for diaphragm beef under quota relaxation. However, the availability of more quota beef may lower the overall level of beef and offal prices shown in the 1989 data (table A-3).

Estimates of Marketing Spreads on Imported Beef Skirts in Japan

Beef skirts have been freely imported, subject only to an *ad valorem* tariff of 15 percent (reduced gradually from 25 percent in 1979). Therefore, there is little reason to expect that extra profits accrue to "butchers' guild" and other Japanese meat trade organizations through Government regulations, as frequently alleged with the quota beef (2,5).

Estimates of actual markups on imported beef skirts provide information on probable price spreads (wholesale price less landed price) on beef imports after quotas are removed and trade liberalization goes into effect. During 1985-89, price spreads resulting from sales to volume end-users (after adjusting for the 15-percent *ad valorem* tariff) averaged slightly more than 20 percent, but ranged from 3 to 70 percent (table A-4).

Table A-4--Estimated ratio of wholesale to imported prices plus tariff for frozen outside skirts and hanging tenders imported from the United States

Year/quarter		Wholesale price 1/	Import price 2/	Tariff 3/	Wholesale/ import prices + tariff
		- - - - - - - - -	Yen/kg	- - - - - -	Ratio
1985	1	1,478	1,072	161	1.199
	2	1,518	1,124	169	1.174
	3	1,503	1,152	173	1.135
	4	1,438	1,101	165	1.136
	Avg.	1,484	1,112	167	1.161
1986	1	1,351	1,013	152	1.160
	2	1,228	954	143	1.119
	3	1,105	862	129	1.115
	4	1,054	891	134	1.029
	Avg.	1,185	930	140	1.106
1987	1	1,045	834	125	1.090
	2	1,062	753	113	1.226
	3	1,147	784	118	1.272
	4	1,064	786	118	1.177
	Avg.	1,080	789	118	1.191
1988	1	1,284	705	106	1.584
	2	1,493	764	115	1.699
	3	1,405	896	134	1.364
	4	1,171	888	133	1.147
	Avg.	1,338	813	122	1.448
1989	1	1,477	889	133	1.445
Four-year average					1.239

1/ Wholesale prices were derived from averaging prices of hanging tenders and outside skirts by varying import quantity weights. Quarterly price is the simple average of monthly prices, lagged by 1 month to allow time for domestic shipment and handling after landing. For example, the first quarter price is the 3-month average of February through April.
2/ Estimated by removing frozen tongues and livers and chilled offals from the total figures reported in import statistics. 3/ Based on an ad valorem rate of 15 percent.

Sources: Shokuniku Tsushin-Sha (Meat Press). Personal communication and Monthly Report, Shokuniku Kai, Tokyo and Osaka, various issues, and Japan Exports and Imports, Commodity by Country, Japan Tariff Association, various issues.

Table A-5--Estimated ratio of wholesale to imported prices plus tariff for frozen skirts imported from Australia

Year/quarter		Wholesale price 1/	Import price 2/	Tariff 3/	Wholesale/ import prices + tariff
		- - - - - - - - - -Yen/kg-	- - - - - -		Ratio
1985	1	1,117	769	115	1.263
	2	1,120	793	119	1.228
	3	1,041	783	117	1.156
	4	910	650	98	1.217
	Avg.	1,047	749	112	1.216
1986	1	879	617	93	1.239
	2	844	604	91	1.215
	3	700	557	84	1.093
	4	661	516	77	1.114
	Avg.	771	574	86	1.165
1987	1	625	469	70	1.159
	2	614	431	65	1.239
	3	599	458	69	1.137
	4	579	431	65	1.168
	Avg.	604	447	67	1.176
1988	1	618	390	59	1.378
	2	800	454	68	1.532
	3	883	637	96	1.205
	4	776	649	97	1.040
	Avg.	769	533	80	1.289
1989	1	832	577	87	1,250
Four-year average					1.214

1/ Wholesale prices were derived from averaging prices of thick skirts and thin skirts by 50:50 weights. As with U.S. skirts, the quarterly price is a simple average of monthly prices, lagged by 1 month. 2/ Estimated by removing frozen tongues and livers from the total figures reported in import statistics. 3/ Based on an ad valorem rate of 15 percent.

Source: Shokuniku Tsushin-Sha (Meat Press). Personal communication and Monthly Report, Shokuniku Kai, Tokyo and Osaka, various issues, Japan Exports and Imports, op. cit.

Figure A-5

Wholesale Prices of Imported Diaphram Beef

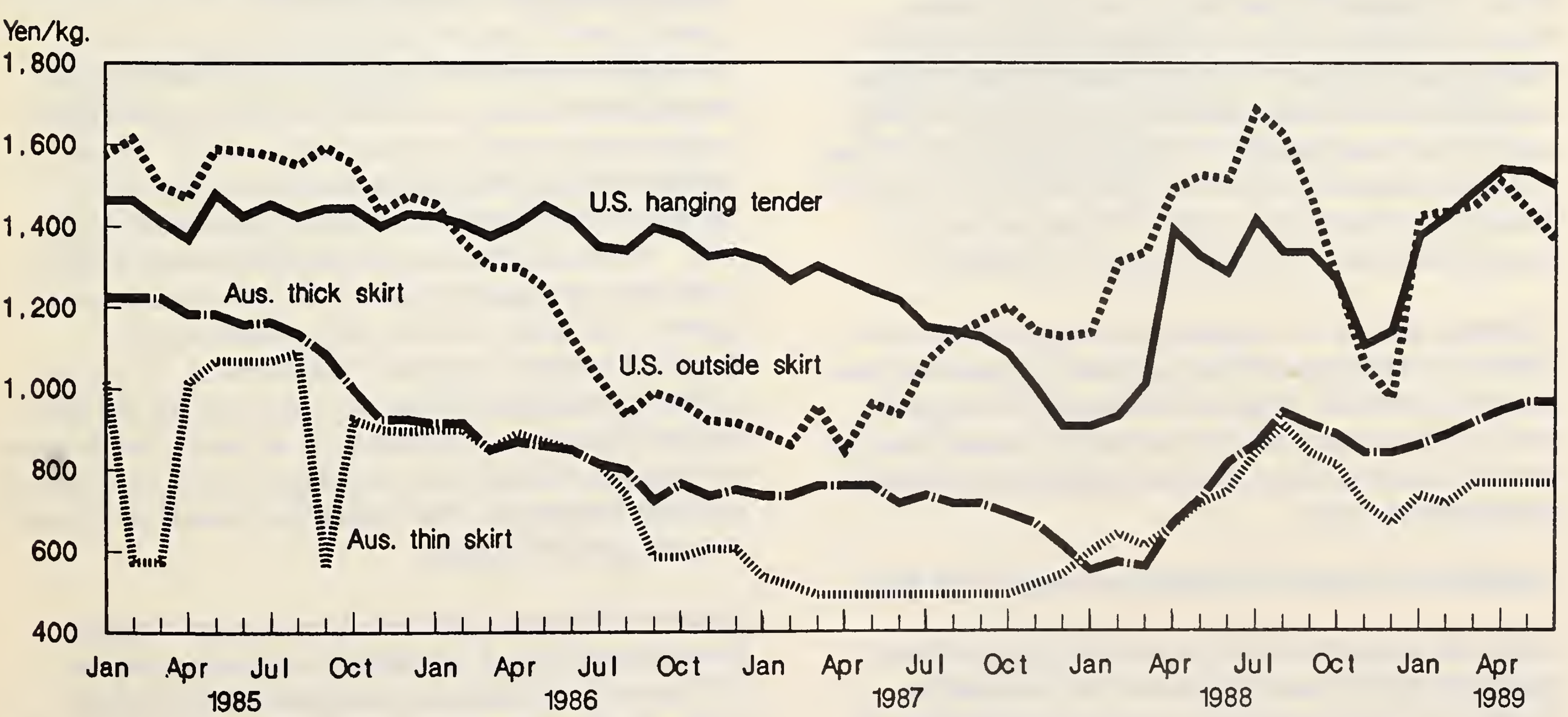


Table A-6--Estimated imports of nonquota beef skirts, by cuts, by Japan, 1984 to 1987

Cuts	1984	1985	1986	1987
	Metric tons			
Total offals including tongues	65,057	74,291	88,413	90,888
Hanging tenders from the U.S.	14,572	21,370	17,763	18,260
Outside skirts from the U.S.	21,858	21,370	32,987	33,910
Thick skirts from Australia	2,730	2,600	3,095	3,181
Thin skirts from Australia	2,730	2,600	3,095	3,181
Skirts from other countries	3,650	4,160	4,950	5,090
Total skirts	45,540	52,000	61,890	63,622

Source: Courtesy of K. Okumura, Chief Editor, Shokuniku Tsushin-Sha (Meat Press), Tokyo.

Price spread information is crucial for projecting the demand impacts of beef trade liberalization. Use of prices without adequate allowances for marketing margins would tend to overestimate the volume of beef expected to be imported. Analyses should be based on wholesale prices of imported beef, which include marketing price spreads rather than landed prices (c.i.f. prices plus tariff).

Estimating pre-1988 import prices of frozen skirts from the United States and Australia is not as simple as estimating their wholesale prices. Import prices for offals included prices of frozen tongues and livers, which were substantially lower than for frozen skirts (table A-2). The weighted average price also included prices for chilled products, which might have been appreciably higher.

Average import, c.i.f., prices of "internal organs and tongues, fresh or chilled or frozen" for 1985-87 were adjusted to derive an estimated import price of frozen skirts alone. Prices for diaphragm meats (including outside skirts and hanging tenders) from the United States and Australia were averaged by the tonnage shown in table A-6. These prices must further be adjusted by the changing tariff rates. The import tariff on diaphragm beef was 21.3 percent of c.i.f. price during 1982 through March 1984, 18.8 percent for April through December 1984, and 15 percent thereafter (7).

Marketing margins for nonquota diaphragm beef are an indication of expected marketing margins of regular beef after quotas are removed. Based on the margins for nonquota beef, wholesale prices of imported beef after trade liberalization would average about 20 percent higher than the landed price including tariff.

Outlook for Japanese Imports of Diaphragm Beef

It has been argued that Japan imported large quantities of diaphragm beef because regular beef was restricted by quotas (13). Some economists claimed that Japanese beef trade has been politically managed or biased in favor of the United States (1). Also, fed beef diaphragms from the United States have been alleged to compete with grass-fed beef from Australia. These arguments suggest that diaphragm beef imports from the United States will decrease substantially when the beef quotas are removed. If this decline materializes, the U.S. share of Japanese beef imports, including offals, could decrease significantly.

However, diaphragm beef imports are not likely to decrease substantially in the near future. Regular beef is still subject to tariffs ranging from 50 to 70 percent, while diaphragm beef will be subject to a 15-percent tariff through 1993. Conversely, imports of U.S. diaphragm beef are unlikely to increase. Since more than 90 percent of the hanging tenders and outside skirts from U.S. fed animals are currently exported to Japan, there is little room for expansion without increasing the size of the U.S. cattle herd.

The long-run outlook for diaphragm meat consumption in Japan depends largely on trends in Japan's meat markets, a continued shift toward meat consumption for its protein supply, exchange rates, and the market structure that replaces the LIPC after beef quotas are removed in April 1991. Wholesale prices of beef cuts differ substantially between grain- and grass-fed beef, with grain-fed beef priced higher. After quota removals, the assertion of LIPC favoritism toward U.S. fed beef will be tested. If the price difference remains unchanged between grain-fed and grass-fed beef, the above assertion may prove untrue, and the price relationships with respect to diaphragm beef can be expected to remain unchanged. Thus, little change would be expected in diaphragm beef imports.

However, if the price relationship between grain-fed and grass-fed beef widens, the assertion of favoritism by the LIPC toward U.S. beef may be regarded as true, and the demand for diaphragm beef would be affected adversely. If

the U.S. f.o.b. export prices of diaphragm beef remain unchanged, imports of diaphragm beef will likely fall. But since the U.S. export f.o.b. prices of diaphragm beef are determined mainly by Japanese market conditions, there is no reason to expect that these prices would be unaffected. They would very likely decline in line with wholesale prices of regular beef. In this case, the quantity of diaphragm beef imported will not be adversely impacted.

Diaphragm beef is often said to be more palatable than short-ribs and chuck ribs of grain-fed beef. Due to the limited availability of diaphragm beef from grain-fed cattle, wholesale prices and import prices of this beef may even rise unless wholesale prices of regular beef fall significantly.

Imports of regular beef may increase substantially, especially after March 31, 1993, when the lower tariff of 50 percent becomes effective. The question of interest is what type of beef will Japan import. Will they choose mostly grain- or grass-fed beef; frozen or chilled? The information to accurately answer this question is not available at the present time. It will be necessary to monitor the Japanese beef market carefully over the next 3 years. However, there appears to be no reason to expect any drastic changes in imports of diaphragm beef in either direction after the regular beef quota is removed in April 1991.

Future potential for rapid growth in Japanese beef imports depends on tariff negotiations, as tariff levels of 50 to 70 percent are estimated to be the equivalent of the final 1991 quota level. Income growth will affect the mix of beef products purchased in Japan in a more liberalized market.

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